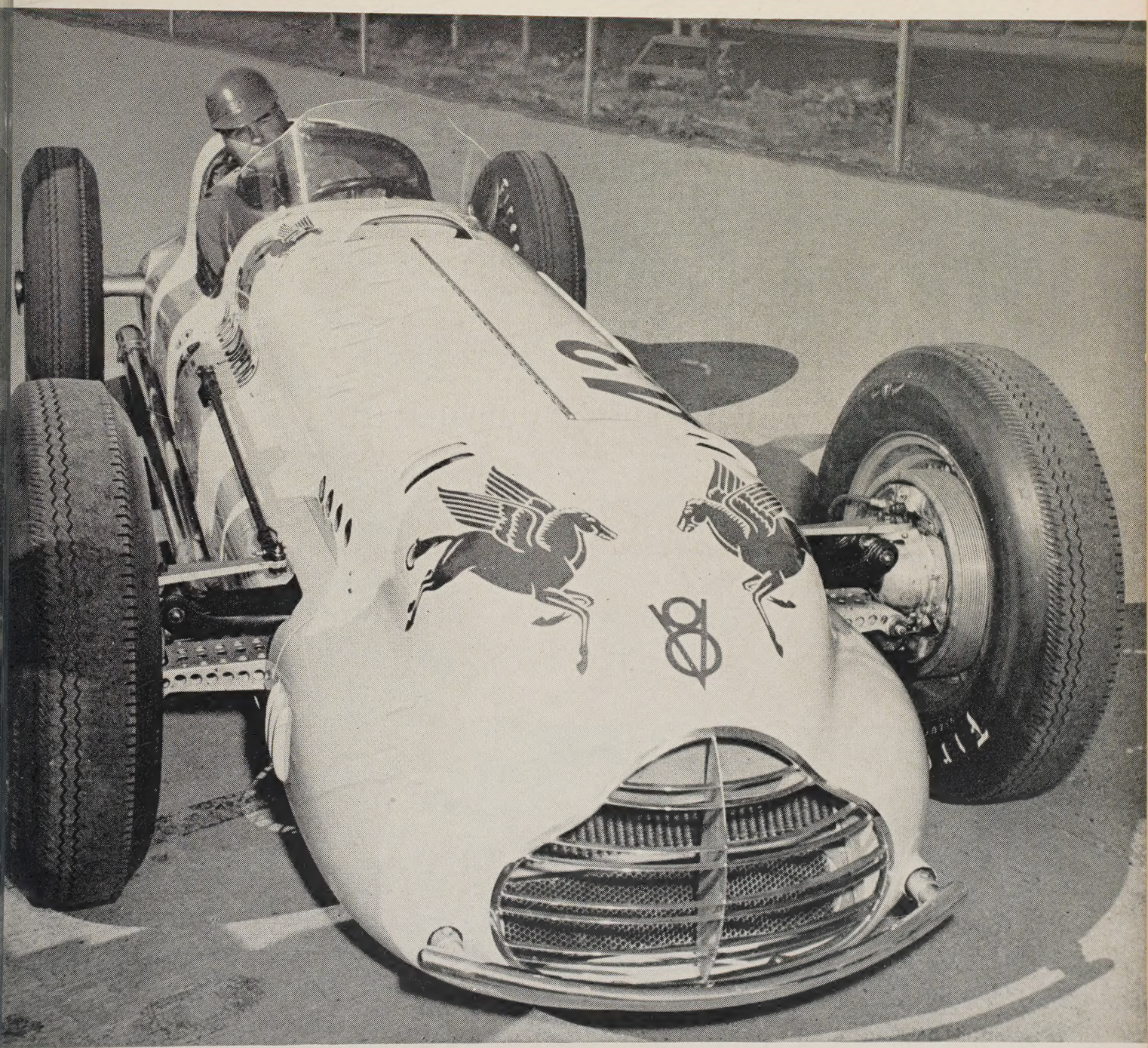
# ROAD and TRACK

ANNUAL ISSUE

June 1950 35¢



CHET MILLER IN NOVI
See Page 8

*The Motor Enthusiasts' Magazine*

# BOOKS ------ for The Motor Enthusiast

## • TWO BOOKS NO ENTHUSIAST'S LIBRARY SHOULD BE WITHOUT •

**A RECORD OF MOTOR RACING . . . . . $12.50**
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Written by 22 year old Gerald Rose (now 64 and very much alive) and published first in 1908 by the Royal Automobile Club, A Record of Motor Racing has long been considered a classic inasmuch as it consisted of a complete history of the early days of motor racing. Specifically, the book deals with a period from 1894 to 1908 and contains material and photographs, which are no longer obtainable anywhere else. It is a rare bit of fortune for the students of motor racing to not only have access to, but to be able to own a copy of this historical book, for with the companion volume "The Grand Prix Car 1906-1939" by Lawrence Pomeroy, he will have a complete and authoritative account of Grand Prix Motor Racing from its inception in 1894 to 1939.

**INDIANAPOLIS RECORDS OF THE AUSTIN A-90 . $2.25**
A complete account of the famous run which broke 63 American stock car records. Written by one of the drivers, it gives a full, interesting and accurate account of the complete project from start to finish.

**THE GRAND PRIX CAR 1906-1939 . . . $17.00**
**by LAURENCE POMEROY**

Here is a BOOK among books. The complete story of Grand Prix road racing from 1906 to the outbreak of World War II is given, accompanied by a full technical description of 17 famous Grand Prix cars in the most thorough coverage yet to be assembled in book form. Engineering data, illustrated with cut-away perspective drawings, performance factors, and descriptions form a comprehensive breakdown of the cars discussed.
The following examples of the Grand Prix car are described in thorough detail: 1908 Italia; 1911 F.I.A.T.; 1912 Peugot; 1914 Mercedes; 1920 Ballot; 1922 F.I.A.T.; 1924 Sunbeam; 1926 Delage; 1927 Bugatti; 1930 Bentley; 1932 Alfa Romeo; 1934 Mercedes-Benz; 1936 Auto-Union; 1937 Mercedes-Benz; 1939 Mercedes-Benz.
Much of the information amassed by Mr. Pomeroy in the preparation of this masterpiece has come directly from designers and constructors. The cars themselves, with one exception, have been personally inspected and measured.
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An American account of the origin of the first automobile with a presentation of facts hitherto little known about the how, where, when and why of early automotive history. The author traces the early developments from their birth to the present day car. Illustrated with 150 prints and photographs, the book is a vivid portrayal of the personalities, events and conditions that gave us our present day machines. There are two chapters on auto racing.

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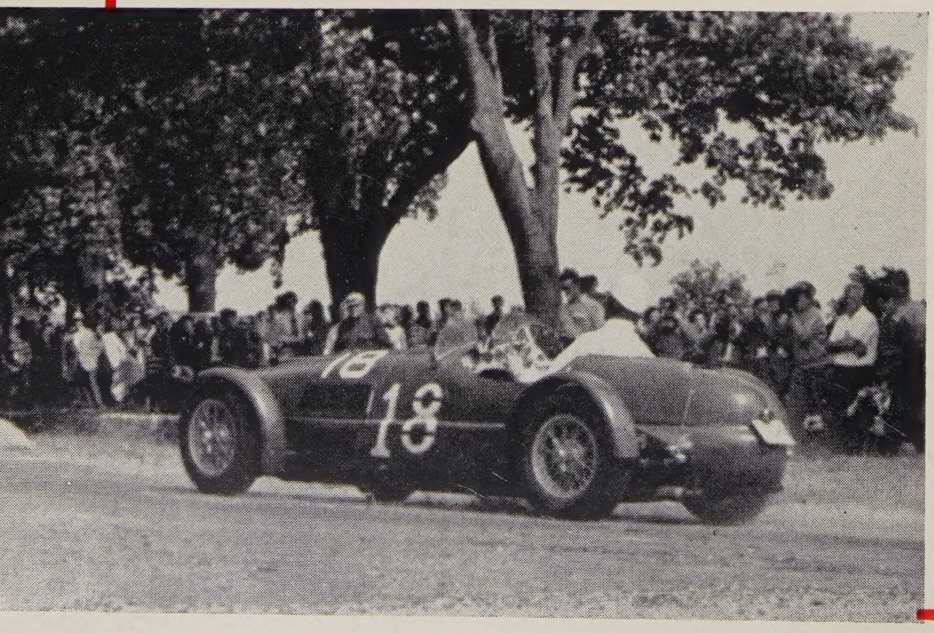
***FIVE EVENTS — FROM 500 cc***
***TO UNLIMITED SPORTS CARS***



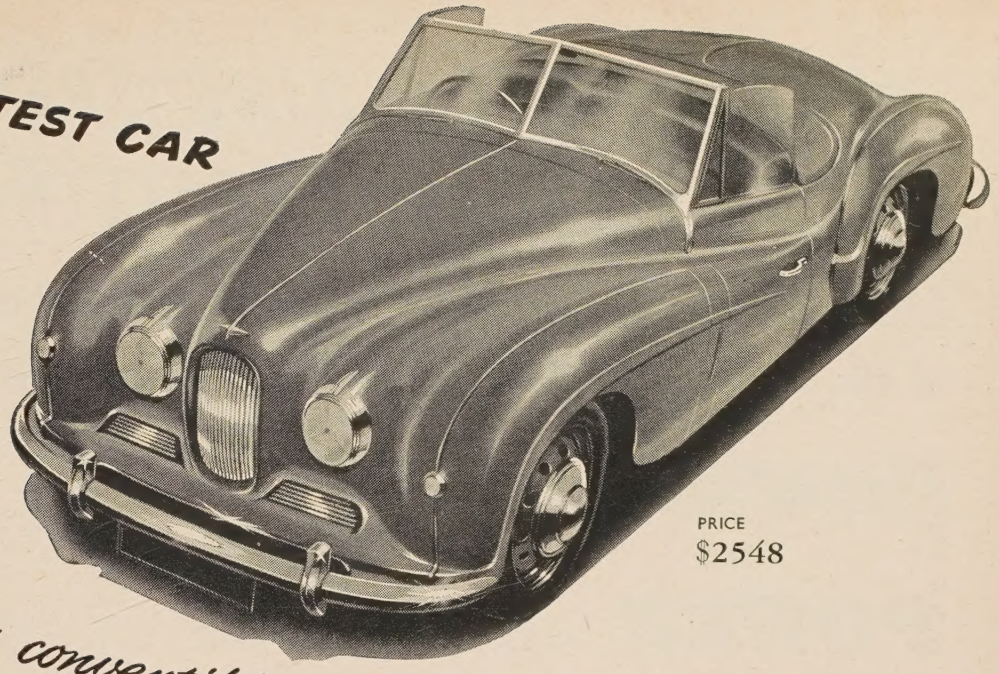
**SATURDAY**

# JUNE 10

Under the auspices of the M.G. Car Club
Sports Car Club of America, and
Motor Sports Club of America

**100 miles East of N. Y. City**
**Bridgehampton, Long Island**
**Rain Date Sat. June 17**

BRITAIN'S LATEST CAR



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THE THRILL of owning and driving a race-bred car is one of the world's supreme pleasures, and the Javelin Jupiter has been specially built to give high speed motoring with supreme comfort in all weathers and under all conditions.

The Jupiter, a product of the craftsmanship of the famous firm of Jowett Cars Ltd., England, is a development of the world-famous Jowett Javelin which gained 1st and 3rd place in the 1949 Monte Carlo Rally (1½ litre class) and 1st place in the 2 litre touring class (65·5 m.p.h. for over 1,500 miles) in the Belgian 24-hour Grand Prix at Spa, in the same year.

On the basis of the Javelin the Jupiter was evolved. The Javelin's horizontally opposed four cylinder engine has been increased from 50 to 60 B.H.P. and has been fitted with two special carburettors; a special type rack and pinion steering gives precision steering at high speed; an absolutely rigid tubular steel chassis gives lightness and tremendous strength; the shock absorbers have been strengthened; bigger brakes fitted and a special oil cooling system installed. The Jupiter has an aero-dynamic lightweight aluminium body seating 3 abreast.

The Jupiter will accelerate to 60 m.p.h. in approximately 15 seconds, reach over 90 m.p.h. and cruise at 80 m.p.h. as a matter of course.

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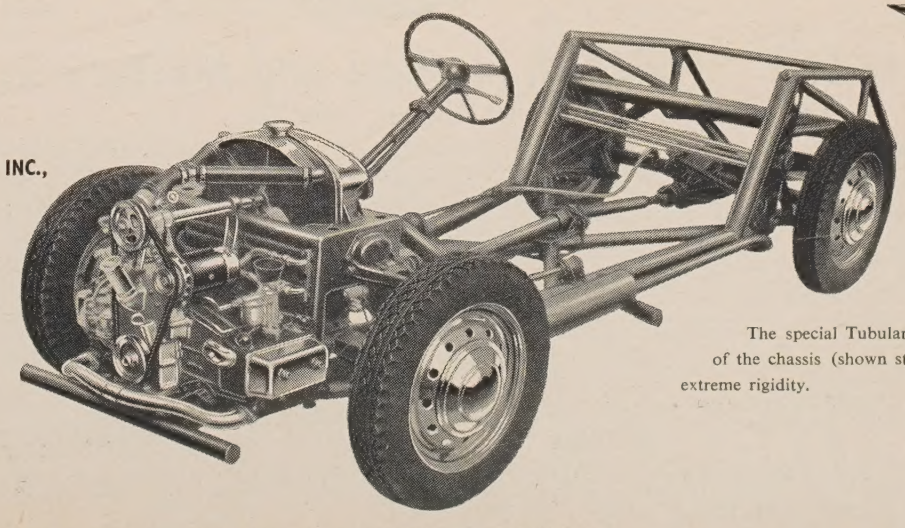

The special Tubular construction of the chassis (shown stripped) gives extreme rigidity.

*THE JAVELIN JUPITER—A PRODUCT OF JOWETT CARS LTD. IDLE, BRADFORD, ENGLAND.*

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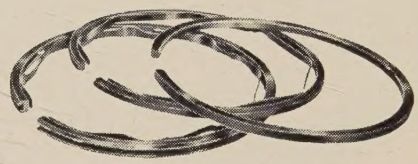

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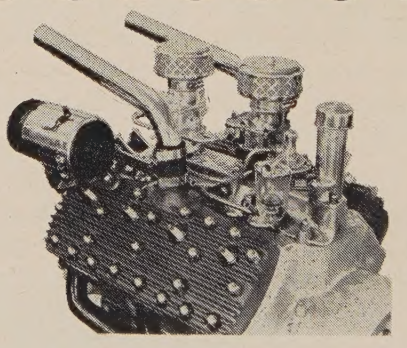

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| 20 | Chrome Manifold Studs @ .19 | 3.80 |
| 48 | Chrome Acorn Cap Nuts @ .10 | 4.80 |
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| 20 | Chrome Manifold Studs | 3.80 |
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| 1 | Chrome Fuel Pump Stack | 2.69 |
| 1 | Chrome Oil Breather Cap | .89 |
| 2 | AA Custom Air Cleaner | 7.30 |
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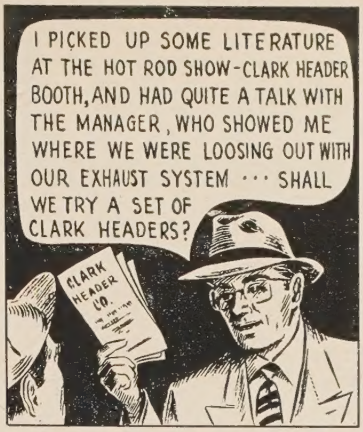
I PICKED UP SOME LITERATURE AT THE HOT ROD SHOW - CLARK HEADER BOOTH, AND HAD QUITE A TALK WITH THE MANAGER, WHO SHOWED ME WHERE WE WERE LOOSING OUT WITH OUR EXHAUST SYSTEM ··· SHALL WE TRY A SET OF CLARK HEADERS?
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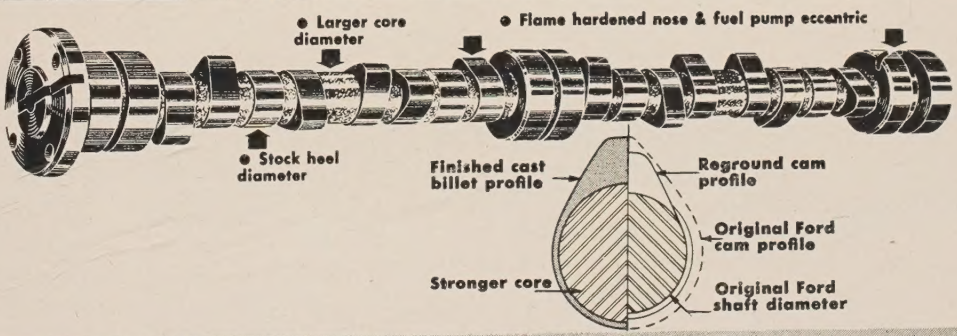
**Harman & Collins announce**

# THE NEW "CAST BILLET"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# CORRESPONDENCE

### LOUIS CHIRON LIKES YANKS

Dear Sirs:

In the April 1950 issue of *Road and Track*, page 18, in the article entitled "Talbot" there are references to Mons. Louis Chiron.

Louis has a fondness for Americans which I presume is a result of his driving at Indianapolis or of his belief in our cause. Mons. Chiron spent a great deal of time and money, and went thru much personal danger to help return shot-down Allied airmen in Europe. As one of those airmen I would like to remind him that we haven't forgotten his kindness in those times.

Nelson G. Cockrum
1st. Lt., USAF.

Fort Worth, Texas

*Chiron is a great driver, a true sportsman, and a real hero.—ED.*

### 1951 LINCOLN CONTINENTAL?

I read in *Road and Track* (April '50 issue) that Lincoln will soon re-introduce a "Continental".

Here are a couple of sketches of what I think it will look like:

Built on a Lincoln Cosmopolitan chassis, the spare will be mounted outside and the top will be of the "Coupe de Ville" type. The top probably will be built in two pieces so that the front portion is removable as in the Coachcraft Lincoln Coupe de Ville built in 1946.

The top will be trimmed with chrome and the top portion of the doors padded with leather.

Jim Yamamoto

Los Angeles, California

*It will be interesting to see how accurate this prediction will be. See "Sketch Pad" on page 29.—ED.*

### CHEVY ENGINE IN M.G.?

Dear Sir: (Attn: John Bond)

In the February 1949 issue of *Road and Track* magazine, on page 8, you mention a Ford V-8 Engine in an M.G. Could you please send further information on this conversion. Who? Where? Could I possibly have a Chevrolet 105 HP Power-glide engine installed in my M.G. "TD."

Gerald Lehrer

New York City

*It would be impossible to install a six cylinder Chevrolet engine in an M.G. without very extensive alterations such as lengthening the frame, stronger axles, etc., and I am sure the much heavier engine would seriously upset the handling qualities of the car.*

*See May '50 issue of* Road and Track, *page 14, for details on Ford V-8 "60" engine installed in an M.G. by Smith and Jones, race car engineers of Long Beach.—Tech Ed.*

### '50 FORD A STINKER

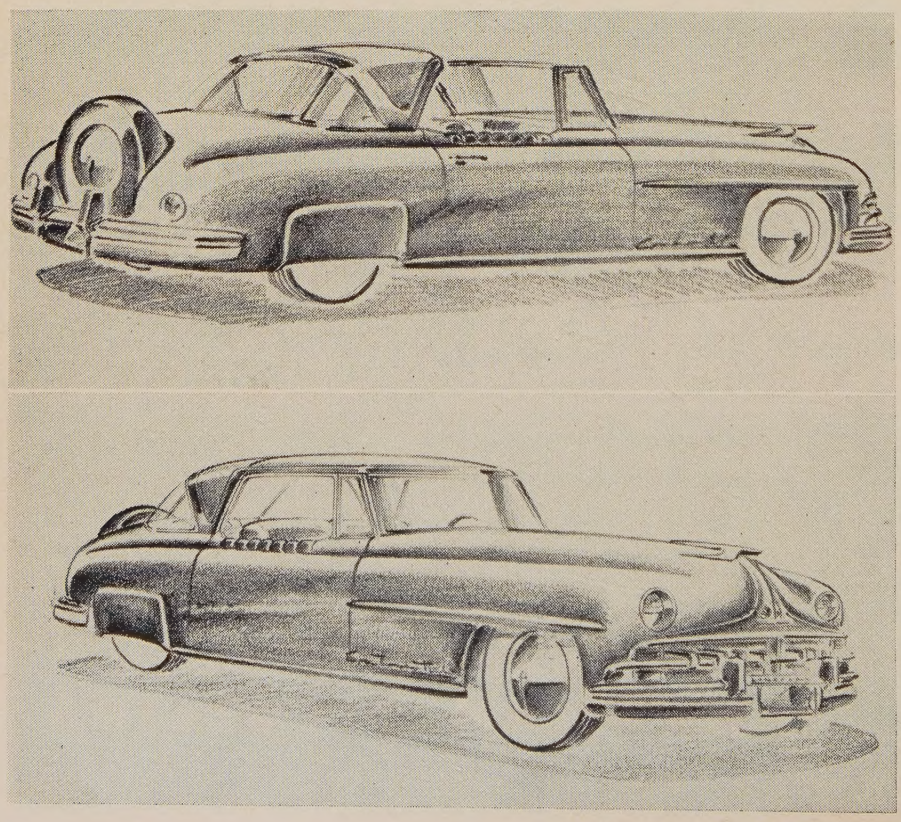
Dear Sirs:

I have one comment on the Design Forum about the '50 Ford. The question was; What can be done to a '50 Ford? Answer should have been . . . . Why pick on the Ford, doesn't it look bad enough to you now. I would suggest that if you go for customizing a car, pick one that would readily show the difference and not one that is too late to remedy. For instance, the '50 Studebaker, Hudson or Kaiser-Frazer.

A. Whitman

New Washington, Ohio

*Personally, I consider the '50 Ford one of the best looking current American automobiles. See page 14 for other opinions.—Ed.*



### EDDIE MEYER MANIFOLD ON ALLARD J-2

Dear Sir: (Attention John Bond)

I would like to call your attention in your article on the Allard J-2 in the May 1950 issue of *Road and Track*, your description of the equipment of the J-2 Allard reading: "The J-2 is available from England with a bored and stroked pre-war model Mercury engine of 268 cubic inches and developing 120 BHP at 3800 RPM. The special alloy heads and manifold supplied with this engine are remarkably similar to Edelbrock, and since the displacement increases, etc., etc."

I would like to bring to your attention that Mr. R. J. Canham of the Allard Motor Company, Ltd. of London, England visited our establishment on May 22, 1948 and I gave him one of our Eddie Meyer Speedway Open Type Manifolds to fit the Ford and Mercury engines. I am very honored that Mr. Canham should have his engineering department make an absolute duplicate of my manifold with the exception of the name plate and that they are now using it on their engines. This is no reflection on any other type of manifold but I do want to receive credit when it is due me.

I wish to state further that this manifold was used on Tom Ince's INVADER, as well as on MISS HOLLYWOOD, the HI-BALL, and DINAH-MITE in establishing their world record runs. The "60" version of this manifold has also won many outstanding victories in the V-8 midget field.

The V-8 60 version of this manifold was also used, as were our pistons, heads, and ignition system on the V8-60 car that Mr. Ray Brown ran thru the SCTA meet of June 19, 1949 at a speed of 134.73 miles per hour.

Mr. Sterling Edward's V-8 60 which won the Palm Springs Road Race on April 16, 1950 also used one of our Eddie Meyer "60" competition engines.

This is just to keep the records straight.

Eddie Meyer Engineering Company
Eddie Meyer

West Hollywood, California

### CONTINENTALIZED FORD

Dear Sirs:

I greatly enjoyed the last issue, especially the story on the Continentalized Ford.

Enclosed find snaps of my own new chartreuse job. This car causes a lot of excitement wherever I happen to go and is an eye opener both in comfort and performance. Certainly it could compete with a lot of European automobiles, putting on a good show both in style and pep.

Henry Knox

Los Angeles, California

*"Continental-type" spare tire mounting for late Fords is available from several manufacturers.—ED.*

## CORRESPONDENCE

### V-8 "60" ENGINE IN AN M.G.

Dear Sirs:

I have a complaint — on page 14 of the May issue there is an article entitled, "Here's A 120 MPH M.G." The photos are fine but the "yak-yak" about the car leave me cold. How about more technical details?

Jack Early

Los Angeles, California

*Seems the editor went on a trip with the original story on the M.G. V-8 "60" in his brief case. So . . the harried staff, without benefit of facts, whipped up some copy to fill the space. Here are the details:*

A Long Beach dentist, Dr. Charles E. Cresmer, owner of the first M.G. TC in that city, wanted an M.G. which could "take" all stock American "iron" and average sports cars. Smith & Jones, race car engineers, and Dale Holliday of that organization, worked out the details.

Basically, the engine is a Smith & Jones V-8 "60" midget conversion having a displacement of 142 cu. in. (bored and stroked) and developing about 110 HP at 6000 RPM. Equipment includes a Smith "260" cam, Smith & Jones 8½ to 1 heads and dual manifold, model 81 Stromberg carburetors, JE pistons, and an H.C. fuel pump. The block is ported and relieved, valves are machined for lightness, crankshaft is shotpeened and balanced, a 13 pound flywheel fitted, and all reciprocating parts are balanced and magnifluxed.

The standard 12-volt M.G. generator is used in conjunction with a special 12-volt Kong ignition. To drive the generator at proper speeds to produce true tachometer readings the pulley on the engine crank was machined to the same size as that of the M.G. The Ford starter operates on 12 volts quite satisfactorily. A Ford truck clutch drives the standard M.G. transmission which has been fitted to the "60" block by means of an adapter plate. The engine was relocated 3 inches aft of the regular position. The steering column and rear M.G. engine hangars were moved back 3 inches and Jeep front engine mounts are used. A 3½" midget radiator core having 7½ pound pressure is used. Special headers and exhaust pipes are used in conjunction with a set of Advance mufflers. Installation did not require alteration of the firewall or frame. Clutch and brake pedals are in their same relative location.

Dr. Cresmer worked closely with Smith & Jones, making and installing his own fuel lines and ignition components. The installation, which is 25 pounds lighter than the original TC, requires about 2½ weeks. Using developed horsepower figures and total weight, it is estimated that the car should do 120 mph at 6000 RPM. The doctor is anxious to run at the Lakes and also wishes to challenge Clark Gable in his Jaguar.

*Credit for photos of Dr. Cresmer's M.G. should have gone to A. L. Gerhardt.* —Ed.

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# ROAD and TRACK

Helbros
Official Timepiece

## YANKEE SPEEDWAY

The Indianapolis 500-mile Race is an event which brings into sharp focus, for the motor enthusiast, the sad state of affairs existent in closed circuit automobile racing. In the entire world today, there is only one speedway suitable and available for high-speed racing and record attempts — Montlhery in France. And even this track is inadequate. Record runs on super-highways are limited in length and availability while Bonneville Salt Flats are subject to seasonal floods; the use of both courses are expensive and difficult to obtain.

Indianapolis Speedway was built at a time when 100 mph on the track was unheard of. As a result, the square layout has relatively sharp, flat turns which drastically reduce speed. The rough surface makes heavy, rugged construction of cars necessary. Race car development, therefore, is forced into valueless channels. And, above all, the nature of the '500,' as a business, makes use of the track for varied types of racing and for amateur sports events an impossibility.

There is but one answer—a great speedway, designed for high speed and including a road circuit *(see page 10)*, to match the importance of the American automotive industry.

Co-operative effort by sports car clubs, motor enthusiasts, race fans, professional race people, and the automotive industry could make this super speedway possible.

## MEXICAN ROAD RACE

The recent six-day border to border race for stock cars, sponsored by the Mexican Government, was declared to be a great success and is to be an annual event. With 57 finishing out of the original 126 starters, this 2,178 mile road race assumes great possibilities as a "super Mille Miglia."

Long stretches of straight and level paved highway produce ideal conditions for American cars. Flat-out speeds can be held during most of the race and only a minor portion offers sharp turns and rough road. Since the American car has the advantage, the manufacturers should be willing to actively participate in this great high speed test.

There are, however, several phases which should be "tidied-up" if the Pan-American Race expects to become a permanent racing fixture. The rules should be complete, precise, void of loop-holes, and fair to *all*.

The "strictly stock" rule should be *rigidly* enforced with *thorough* inspection *by experts both before and after the race.* The Mobiloil Economy Run is a good example of proper scrutineering. The inclusion of a special class for sports cars (F.I.A. rules) would add interest for tourist spectators and motor enthusiasts. Properly organized, the "Carrera Panamericana" could become one of the world's greatest races.

**June, 1950** **Vol. 1, No. 12**

## CONTENTS


| | |
|---|---|
| Pan-American Road Race | 6 |
| Heart Trophy Race | 7 |
| Chet Miller | 8 |
| Super Speedway | 10 |
| A Future Speedway | 11 |
| Road Racing | 12 |
| Road Racing and Big Engines | 13 |
| Esthetics of Automobile Design | 14 |
| Kurtis 3000 Series | 16 |
| SALON—Pinin Farina | 17 |
| Jaguar XK-120 Successes | 18 |
| Packard Experimental Car | 19 |
| Old Time Racing at Ascot | 22 |
| Bentley | 24 |
| Noise | 25 |
| Design Forum—Indianapolis Race Car | 20 |
| Hotchkiss-Gregoire | 26 |
| The Big Coopers | 28 |
| Sketch Pad—1951 Lincoln Continental? | 29 |
| Antique and Veteran—Race Cars | 30 |
| Club Activities | 32 |
| Story of a Speedway Car | 33 |
| Indianapolis Trophies | 34 |
| News | 35 |
| Austin A-40 Breaks 36 A.A.A. Records | 37 |



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# CARRERA PANAMERICANA México

Typical desert scene along route of 2,178 mile Mexican Road Race. Long, level straights permitted flat-out speeds.

Thomas Deal, who won second place in a 1950 Cadillac, receives trophy from President Aleman of Mexico.

Bob Estes congratulates race driver Johnny Mantz and co-driver, Les Viland, on setting Mexico City to Los Angeles record of 34 hours 49 minutes in 1950 Lincoln.

## HERSHEL McGRIFF IN OLDSMOBILE WINS 2178 MILE RACE. ALFAS 5th & 9th

Hershel McGriff, a young race driver from Portland, Oregon, drove his 1950 Oldsmobile to a $17,381 victory in the six-day, 2178 mile road race from Juarez to El Ocotal. His total elapsed time for the border-to-border run was 27 hours, 34 minutes and 25 seconds for an average of slightly over 79 mph.

Sponsored by the Republic of Mexico to publicize the opening of the Pan American Highway, entries were limited to strictly stock five-passenger "hard-tops." Of the 126 cars which started the race, mostly 1949 and 1950 models, only 53 officially completed the run. Many were eliminated on the first leg, which crossed desert country and permitted very high speeds—some averaged well over 90 mph. Accidents were frequent on the winding mountain roads near Mexico City, with brake failure a frequent cause. The last leg included a long unpaved stretch which played havoc with tires. This lap was a jinx to 2nd place winner Tom A Deal, who was leading the race with his '50 Cadillac at the end of the previous day but was only 10th fastest over this portion.

Johnny Mantz, popular race driver, led the race into Mexico City by 11½ minutes at an average of 91 mph. South of Pueblo, where he had pushed the Bob Estes '49 Lincoln to a 13 minute lead, Mantz was delayed by locked brakes for 1 hour 15 minutes. He was, however, back in the lead at the end of the paving. Here, the rough gravel surface soon shredded his racing-type tires and the Lincoln finished in 10th place on three sad tires and a bare wheel worn almost to the brake-drum.

Tommy Francis sacrificed his chances when he overturned on the last lap to avoid hitting a child. Altho he was uninjured and continued the race to finish in 36th place, the newspapers siezed the opportunity to headline, "Kathy Fiscus Hero Killed in Race." Tommy received a special award for his sportsmanship.

All three of the European entries finished in the first ten. Surprizingly, the Alfa Romeo team consisted of the slower long-chassis, single-carburetor models. While they were not able to gain on the large-engined American cars over the paved straight roads, they came in second and third on the rough final leg. Team drivers were Pietro Taruffi of Grand Prix and records (Tarf) fame, and Felice Bonetto, Grand Prix and Mille Millia driver.

Altho some doubt was cast on the adherance to the strictly stock rule, arrangements and facilities were not on hand to make proper inspections. In the majority, the contestants, officials, and spectators declared the race to be a great success and plans are being advanced to make the "Carrera Panamericana" an annual event.

### RESULTS

| | | | | | |
|---|---|---|---|---|---|
| 1 | H. McGriff | Oregon | '50 Olds | 27 | :34.25 |
| 2 | Thomas Deal | Texas | '50 Cad. | 27 | :35.41 |
| 3 | Roy Connor | Texas | '50 Nash | 27 | :50.35 |
| 4 | Al Rogers | Colo. | '49 Cad. | 27 | :55.39 |
| 5 | F. Bonetto | Italy | '50 Alfa R. | 28 | :01.04 |
| 6 | Bud Sennett | Calif. | '50 Olds | 28 | :02.21 |
| 7 | J. Trevoux | France | '50 Delahaye | 28 | :19.15 |
| 8 | L. L. Solares | Mexico | '49 Olds | 28 | :23.54 |
| 9 | P. Taruffi | Italy | '50 Alfa R. | 28 | :25.36 |
| 10 | John Mantz | Calif. | '49 Lincoln | 28 | :27.10 |
| 11 | Jack McAfee | Calif. | '49 Cad. | 28 | :28.03 |
| 12 | P. A. Salgado | Mexico | '50 Merc. | 28 | :45.48 |
| 13 | Littlejohn | S. C. | '50 Olds | 28 | :55.04 |
| 14 | J. Gonzales | Mexico | '49 Lincoln | 28 | :58.22 |
| 15 | E. A. Kasold | Calif. | '50 Ford | 29 | :11.17 |
| 16 | Leo A. Vera | Mexico | '50 Merc. | 29 | :23.06 |
| 17 | Owen Gray | Texas | '50 Olds | 29 | :26.52 |
| 18 | Arcesio Paz | Colom. | '50 Merc. | 29 | :38.48 |
| 19 | Carlos Moss | Mexico | '49 Olds | 29 | :42.10 |
| 20 | A. M. Acosta | Mexico | '49 Lincoln | 29 | :43.43 |
| 21 | Jesus Valezi | Mexico | '49 Lincoln | 29 | :56.25 |
| 22 | J. Beltran | Mexico | '49 Cad. | 30 | :04.53 |
| 23 | Manuel Lara | Mexico | '49 Cad. | 30 | :09.07 |
| 24 | H. Inciarte | Venez. | '50 Stude. | 30 | :19.30 |
| 25 | J. M. Topete | Mexico | '50 Chrysler | 30 | :44.40 |
| 26 | O. Esquivel | Mexico | '49 Lincoln | 31 | :07.48 |
| 27 | R. Castaneda | Mexico | '50 Cad. | 31 | :07.48 |
| 28 | Ramon Lopez | Venez. | '50 Chev. | 31 | :33.28 |
| 29 | Ali Rachid | Venez. | '48 Chev. | 31 | :34.08 |
| 30 | Sam Marin | Colom. | '50 Ford | 31 | :38.28 |
| 31 | R. Colenbaugh | Illinois | '39 Cad. | 32 | :23.02 |
| 32 | R. Almodovar | N. Mex. | '50 Ford | 32 | :26.11 |
| 33 | L. Albizuri | Peru | '50 Stude. | 32 | :29.50 |
| 34 | Juan Riu | Colom. | '50 Olds | 32 | :35.14 |
| 35 | A. F. Breton | Mexico | '47 Lincoln | 32 | :50.50 |
| 36 | T. L. Francis | Calif. | '50 Ford | 32 | :52.06 |
| 37 | I. R. Garza | Mexico | '49 Olds | 32 | :55.55 |
| 38 | S. Santoyo | Mexico | '49 Nash | 33 | :19.58 |
| 39 | Chas. Fraley | Ohio | '48 Hudson | 33 | :30.30 |
| 40 | L. N. Chavez | Mexico | '48 Buick | 33 | :34.43 |
| 41 | M. Meneses | Mexico | '49 Nash | 33 | :45.57 |
| 42 | E. Camargo | Mexico | '50 Chev. | 33 | :51.04 |
| 43 | A. P. Casero | Mexico | '50 Buick | 34 | :11.35 |
| 44 | J. Hirschfeld | Mexico | '50 Olds | 34 | :14.39 |
| 45 | V. De la Lama | Mexico | '50 Buick | 34 | :48.51 |
| 46 | A. Quirez | Mexico | '50 Merc. | 34 | :52.51 |
| 47 | A. Oviedo | Mexico | '41 Cad. | 35 | :02.24 |
| 48 | Mrs. Lopez | Mexico | '47 Chrysler | 35 | :50.37 |
| 49 | W. M. Gillespie | Calif. | '50 Buick | 36 | :00.17 |
| 50 | D. Aprezza | Calif. | '49 Lincoln | 37 | :52.11 |
| 51 | M. Martinez | Mexico | '48 Cad. | 38 | :02.35 |
| 52 | A. Gonzalez | Calif. | '40 Buick | 40 | :41.26 |
| 53 | Andres Wilz | Mexico | '50 Stude. | 44 | :42.02 |

### LATE FLASH . . . . FINISHING POSITION BY MAKE

#### ANALYSIS OF RESULTS

| Make | Number Entered | Number Finished | Per Cent Finished | Finishing Positions | Average Position | Average Rating |
|---|---|---|---|---|---|---|
| Alfa | 2 | 2 | 100. | 5, 9 | (7) | 1 |
| Buick | 13 | 5 | 38.5 | 40, 43, 45, 49, 52 | (46) | 13 |
| Cad. | 19 | 9 | 47. | 2, 4, 11, 22, 23, 27, 31, 47, 51 | (24) | 5 |
| Chev. | 3 | 3 | 100. | 28, 29, 42 | (33) | 9 |
| Chrys. | 3 | 2 | 67. | 25, 48 | (36) | 10 |
| Dela. | 1 | 1 | 100. | 7 | (7) | 2 |
| Ford | 8 | 4 | 50. | 15, 30, 32, 36 | (28) | 8 |
| Hudson | 8 | 1 | 12.5 | 39 | (39) | 12 |
| Linc. | 15 | 7 | 47. | 10, 14, 20, 21, 26, 35, 50 | (25) | 6 |
| Merc. | 11 | 4 | 36. | 12, 16, 18, 46 | (23) | 4 |
| Nash | 12 | 3 | 25. | 3, 38, 41 | (27) | 7 |
| Olds. | 11 | 9 | 82. | 1, 6, 8, 13, 17, 19, 34, 37, 44 | (20) | 3 |
| Stude. | 3 | 3 | 100. | 24, 33, 53 | (37) | 11 |

1. 2. 3. 4. 5.

Winners of the Panamericana road race with their trophies. 1. Hershel McGriff, 1st place. 2. Bud Sennett, 6th place. 3. Johnny Mantz, 10th place. 4. Felice Bonetta, 5th place. 5. Pietro Taruffi, 9th place. Other identifications not available.

# Heart Trophy Race

## 100 MILE ROAD RACE AT SUFFOLK COUNTY AIRPORT WON BY BRIGGS CUNNINGHAM

—WORLD WIDE PHOTO

Mrs. Zill Taylor Deshon presents Heart Trophy to Briggs Cunningham, winner. Alfred Momo, retired Italian race driver who prepares the Ferrari, shares the glory.

With a Ferrari, an Allard, a Frazer-Nash, and a Jaguar XK-120 battling for the lead, the Suffolk County Airport bore a great resemblance to England's Silverstone. The occasion was the 100-mile Heart Trophy Race, organized by the American Grand Prix, Ltd. for the benefit of the American Heart Association.

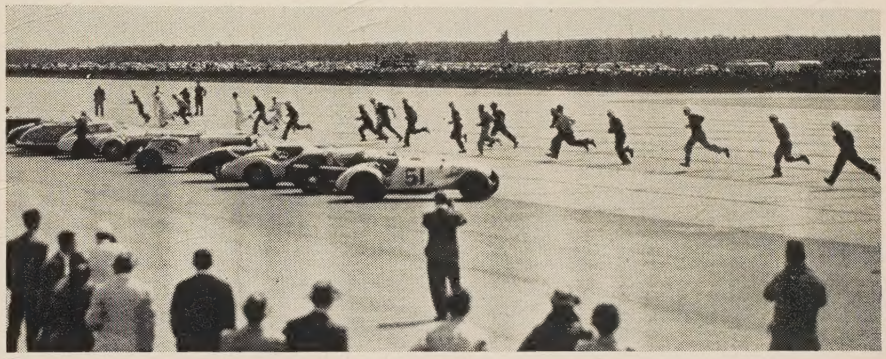
The Trophy Race was preceeded earlier in the day by four qualifying races. The first seven winners in each race to run in the feature event.

Using a Le Mans type start, T. L. H. Cole, Jr. (Allard) was first off and built up a lead of nearly a mile. By the 5th lap, Briggs Cunningham (Ferrari) had moved into third place to challenge A. E. Goldschmidt (Jaguar XK-120) who was running second. On lap 13, the Ferrari passed the XK-120 and began pressing the Allard. Cunningham took the lead on the 28th lap and received the checkered flag two laps later.

Lawrence Kulok (Frazer-Nash) who was last to start, swapped positions twice with Goldschmidt before the XK-120 was able to secure third place.

Drivers reported the 3-mile course to be tougher on tires than the Indianapolis Speedway. Concrete runways, partially covered by a light sand, caused all cars to lose rubber, some down to the fabric.

The only serious accident of the day occured an hour and a half *after* the race was over. E. E. Dawson, a contestant, allowed a friend, Kendal Frost, to make an *unauthorized* run over the course in his M.G. and while attempting a turn the car rolled over and burned. Frost was seriously injured and Dawson suffered cuts.



Drivers sprint 50 feet to their mounts in Le Mans type start. Tommy Cole, Jr., was first off with Alec Ulmann second and A. E. Goldschmidt third. —TED KELL PHOTO

### HEART TROPHY RESULTS

Date: 7 May 1950. Three mile course, airport perimeter.

| | |
|---|---|
| 1. B. Cunningham | Ferrari |
| 2. T. L. H. Cole, Jr. | Cad-Allard |
| 3. A. E. Goldschmidt | Jag XK-120 |

Time: 70:12.4

### CLASS RESULTS

750-1450 cc u/s, 1000 cc s/c

| | |
|---|---|
| 1. B. H. Hannaway | M.G. u/s |
| 2. J. Pauley | Cisitalia |
| 3. E. E. Dawson | M.G. u/s |

1451-1950 cc u/s, 1001-1450 cc s/c

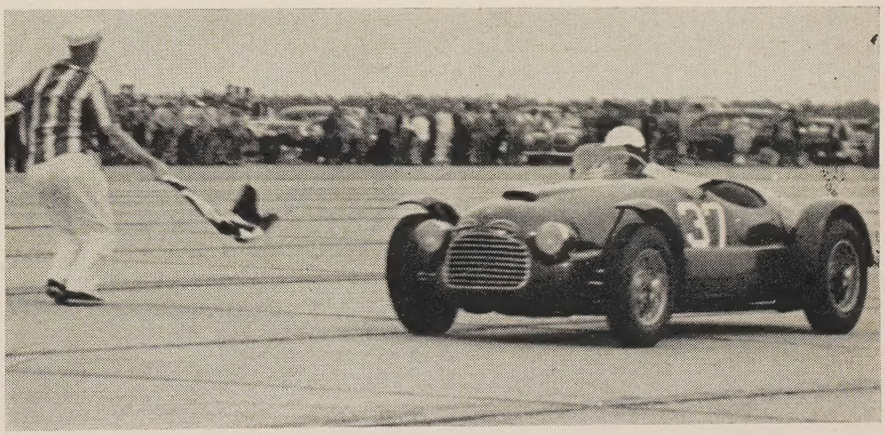
| | |
|---|---|
| 1. J. Bentley | M.G. s/c |
| 2. P. Iselin | H.R.G. |
| 3. R. Deshon | M.G. s/c |

1951-3000 cc u/s, 1451-3000 cc s/c

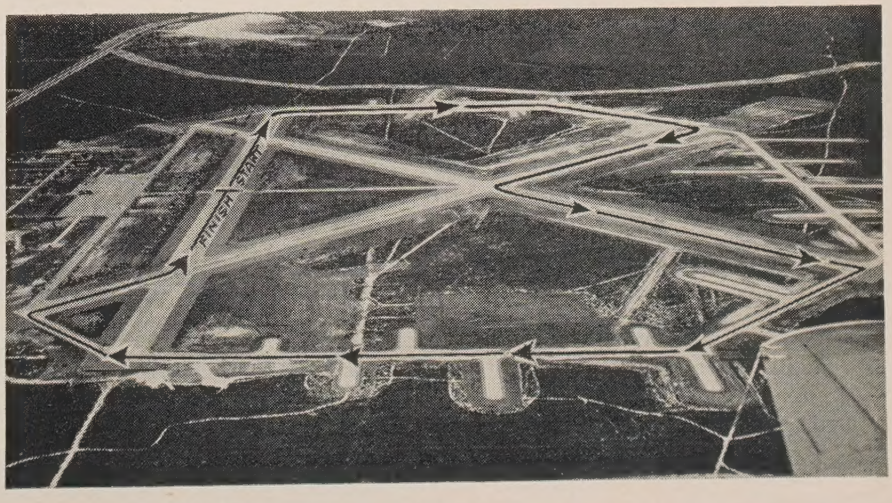
| | |
|---|---|
| 1. B. Cunningham | Ferrari |
| 2. L. Kulok | Fraser Nash |
| 3. A. Pompeo | Nardi Alfa |

3000 cc and over

| | |
|---|---|
| 1. T. L. H. Cole, Jr. | Cad-Allard |
| 2. J. Meyer | Ford Spl. |
| 3. A. E. Goldschmidt | Jag XK-120 |



Briggs Cunningham, driving his 2-litre, 12-cylinder Ferrari takes the checkered flag to win the 100-mile Heart Trophy Race.




Black lines and arrows indicate 3-mile course on runways and taxi-strips of Suffolk County Airport. —TED KELL PHOTO

# CHET MILLER

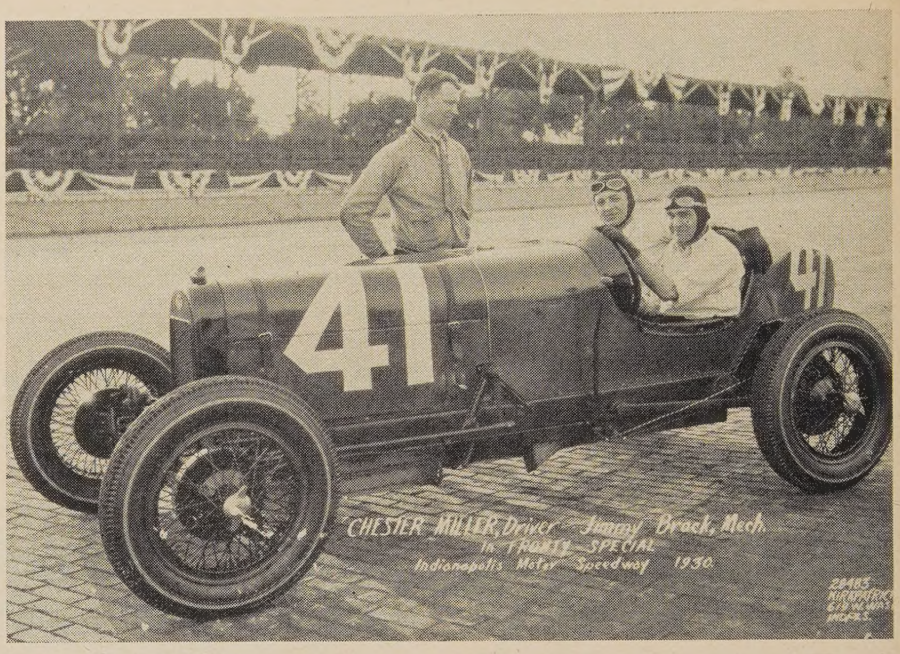
## COLORFUL VETERAN ENTERED IN EVERY "500" SINCE 1927

"The car in front of us had begun accelerating out of the turn when a rod let go. We could see the oil pouring out as he dove across the track for the infield. A sickening lurch and a fast spin announced our arrival on the oil patch. Expecting a crash, we ducked down in the "basement" for protection. After a few hard bumps, the expected crash failed to come and everything seemed very still. Had we spun into the infield or were we still on the track? Very cautiously I peeked over the cowl and WOW—I was looking right into the eyes of spectators way up in the grandstand. We were sailing over the wall at the level of the people in the stands. After a complete somersault, during which my mechanic fell out, the car landed on its wheels with a terrific whack. The car was "bowlegged," Eddie's dignity was bruised, and my seat was numb but otherwise everything was intact. Experimentally, I push the starter button and to my surprise the engine kicked over. I drove behind the stands, thru the tunnel, and to the garage area. Inebriated fans leaned over the side to offer such advice as *the race is on the* other *side* and *they went thatta way.*"

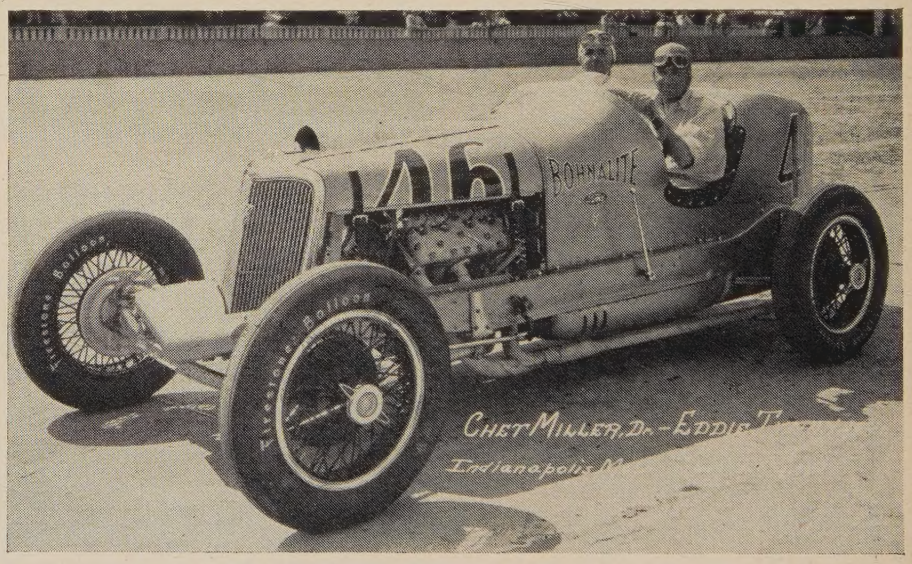
Such experiences are many in the story of Chet Miller, the senior driver of the 1950 Indianapolis Race. Chet is entering the "500" for the 19th time, as the record will show:

1927—First year, drove relief
1928—Wrecked while practicing. Most severe accident sustained in racing.
1929—Drove Relief.
1930—Finished 11th in Fronty Ford.
1931—Finished 10th in Hudson 8.
1932—Hudson. Out, engine trouble.
1933—Hudson. Out, mechanical trouble.
1934—Ford V-8. Over wall, 11th lap.
1935—Finished 10th in 8-cylinder Miller.
1936—Finished 5th in Boyle Miller
1937—Relief Bill Cummins, Finished 7th (Own Boyle Miller out 36 laps)
1938—Finished 3rd, Offy, out of gas 2 laps from finish.
1939—Boyle Offy, three car wreck with Floyd Roberts and Bob Swanson.
1940—Alfa Romeo, out, mechanical trouble.
1941—Finished 6th in Boyle-Miller.
1946—Holliday Front Drive, out, lost oil.
1947—A.S.P.A.R. strike, didn't drive.
1948—Mercedes M-163, out on lap 108.
1949—Rounds rear-engine, failed to qualify.
1950— ? ? Novi Special ? ?

"Fronty-Ford" in which Chet Miller captured 11th place after replacing broken front spring with one "borrowed" from a spectator's Model T sedan in the infield.

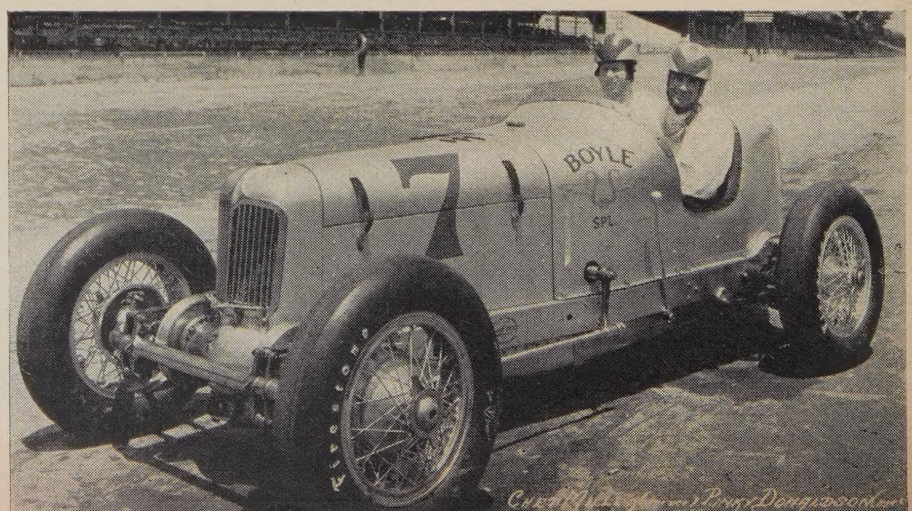



ALL PHOTOS BY KIRKPATRIC (TOWER)




Above, Ford V-8 in which Chet sailed over wall at grandstand level during 1934 race. Note almost stock frame, engine, axle, brakes, radiator and others parts. Carried battery and electric starter as running equipment.

Below, Miller front-drive 4-cylinder, Boyle Special, which Chet drove to fifth place in the 1936 Indianapolis "500." This was his 10th appearance at the Speedway. Forced out in 36th lap in 1937.



Who is this determined man of the Speedway and how did he get speed in his blood?

Born in Detroit, Michigan 47 years ago, Chester Miller was the son of a smelter operator. Racing did not invade his early childhood which was spent enjoying sports, baseball, and hunting with his three brothers and two sisters.

"Chet" became interested in races at the Detroit Fair Grounds Track where stars such as Ralph De Palma and Leon Duray ran. By 1925, his persistance resulted in a chance to drive at the Flint, Michigan track—in a Roof single-overhead. This first "ride" had an abrupt ending, however, as the woodruff key had been forgotten in assembling the steering gear and Chet went thru the fence. After driving Fronty Fords in Michigan and Ohio, Chet ran two races on the Altoona board track shortly before it was condemned. A broken hub ended the first race and he finished 3rd in the second.

Chet rates as his most exciting experience a match race, in the '20's, with Ralph De Palma at Kalamazoo, Michigan. Just a green kid at the time, the opportunity to pit his Fronty against the great Ralph was a real thrill.

While employed as a race driver for Hudson during 1932-33, Chet broke stock car records by the bushel, including Pikes Peak, with the Hudson Terraplane.

Few Americans have driven the wide variety of race cars that Chet can lay claim to. In addition to the usual run of American cars, he has driven the Mercedes, Alfa, and Maserati. Of the Mercedes, Chet has this to say, "Were the car prepared by trained Mercedes mechanics, it could compete with anything we have in this country. It rides like a passenger car on the rough surface of Indianapolis and handles like a dream."

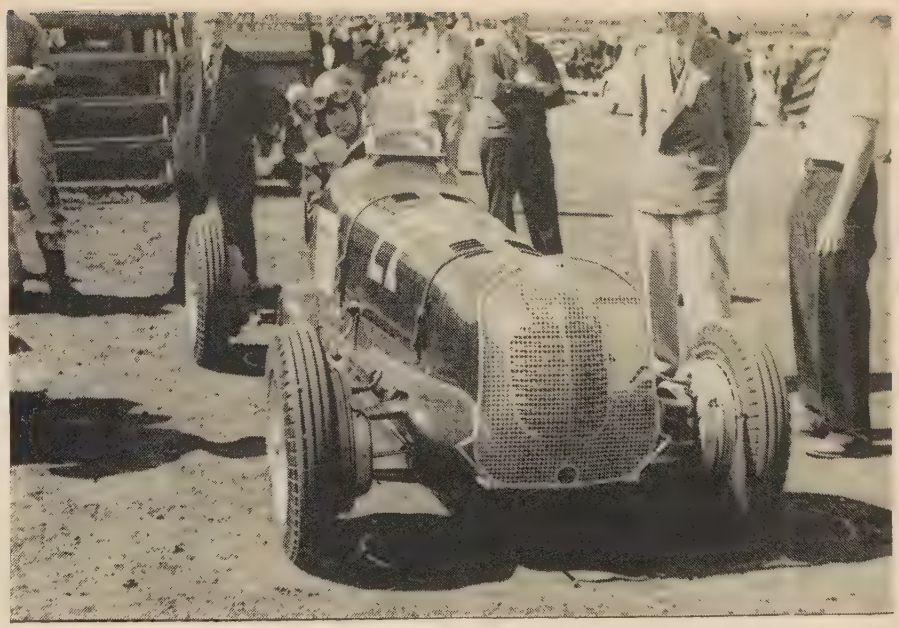
Many of the cars appearing at the Speedway were upholstered by Chet Miller for this is one of his occupations when off the track. In fact, he is considered one of the finest artisans in the business.

For the past four years, Chet and his wife have lived in Glendale, California. This move to California prompted rumors that he was ready to retire from racing but he vows this will happen only when he loses the desire "to go."

Despite his ability at high speed, Chet believes Indianapolis rules should be changed so as to slow down the cars for they are too fast for the track (why not International Formula II?). He would also like to see more garages with modern improvements at Indianapolis.

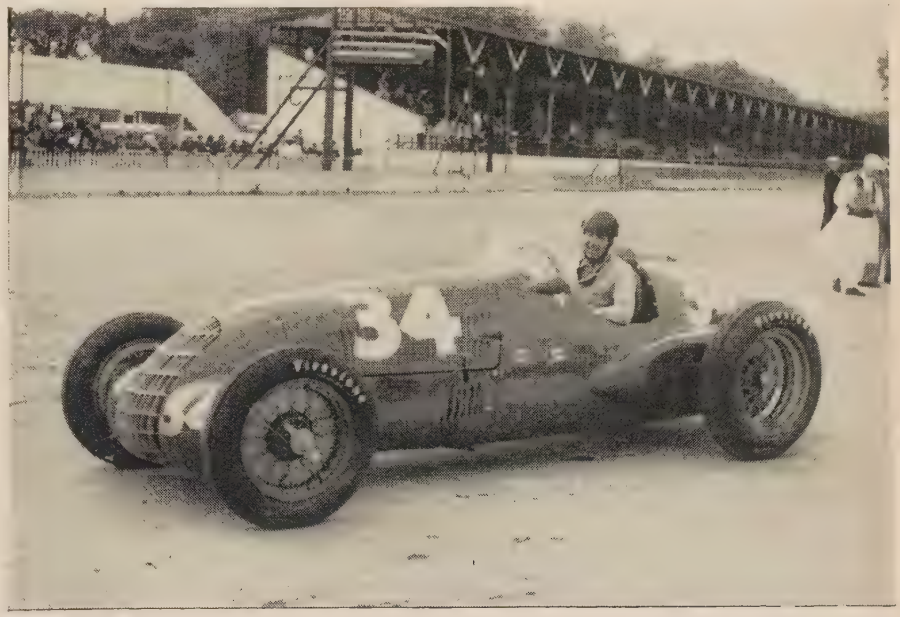
Altho Chet has owned several midgets, he has never driven one. He believes they are good stepping stones for new drivers as they require skill and daring to drive. Of stock cars and jallopy racing, the Speedway Maestro says, "it seems to be more of a thrill show and in my opinion is not racing." Of sports car road racing, "Fine—if kept on amateur standing." He would like to drive in one of the great European Grand Prix, however.

You might say that Chet is exclusively a Speedway driver as he no longer runs in other races. His services, are however, solicited for special driving such as the 600 mile tire testing run at an average of 126 mph that he made with the Novi at Indianapolis for Firestone. This experience should be of great value in piloting the Novi in the 1950 race, a difficult job for any driver. Miller's greatest ambition is to win the Indianapolis "500" race "just once." Perhaps Chet and the Novi will be a winning combination this year—we hope so.

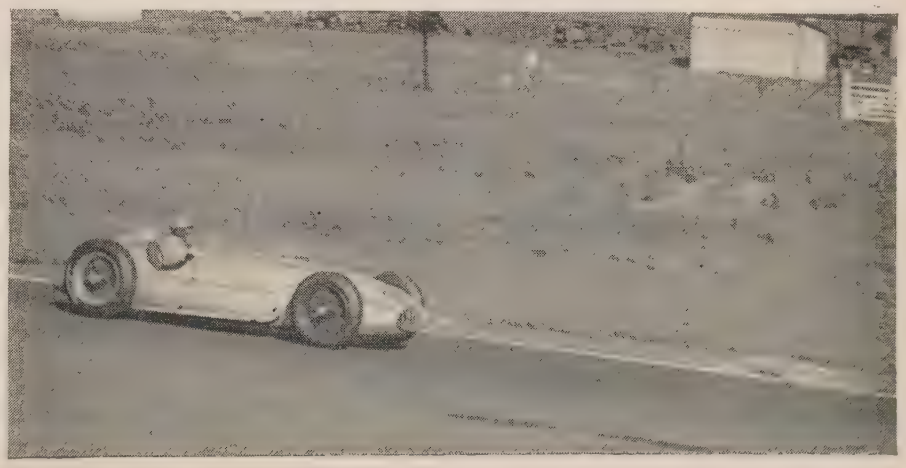


Above, Chet drives Boyle Maserati at Syracuse, N.Y. Note big gravel guard and blocked air scoops on brakes. This is 4CL 1500 cc model.

Below, Alfa Romeo driven by Chet in 1940 "500" was originally Raymond Summer's. Is entered in 1950 race by present owner, Johnny Mauro of Denver. —TOWER PHOTO




Below, Chet takes a turn during 1948 race in the Don Lee Mercedes 3-litre Grand Prix type M 163. Forced out on lap 108 with burned piston. Chassis of this car, with Thorne-Sparks 6-cylinder engine installed, may run this year. —PHOTO BY MARION G. PARKER



# SUPER SPEEDWAY

## DESIGN FACTORS FOR A 200 MPH TRACK

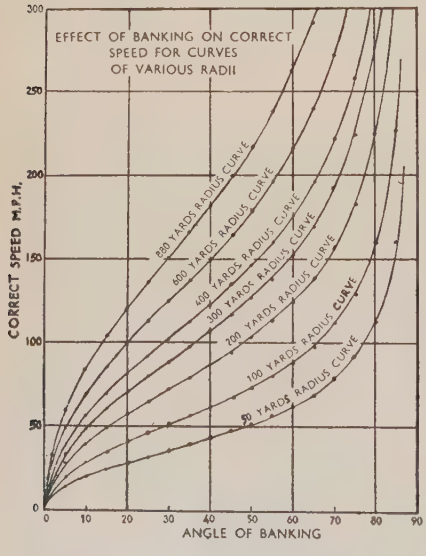
**By Joseph Lowrey—Tech. Editor The "Motor"**

As I see it, a speedway has three closely linked functions. For most of the time it is available to all and sundry for various forms of testing, providing the facilities for tests of vehicles under controlled conditions of speed and load without interference from normal traffic. At special times, it is used for record attempts over various distances, these representing a special type of test; at week-ends or on public holidays, it may be used for racing, still helping to "improve the breed," but also providing entertainment and education for the public.

In designing a track to provide high speeds within a restricted area, a basic decision must be made as to the approximate range of speeds for which it is to cater. This is a vital decision which largely determines the form of the banked turns, and may involve heavy penalties if incorrectly made. If too low a speed is chosen, the track will become obsolete in a short space of years; perhaps even before it is constructed. If too high a speed is chosen, the upper parts of the banking will not be used, and unnecessary congestion will occur towards the inner edge of the track. As a basis for argument, I would personally suggest that any new track be designed for speeds up to at least 200 mph and possibly for 250 mph without dependence being put on lateral friction between the car tires and the track.

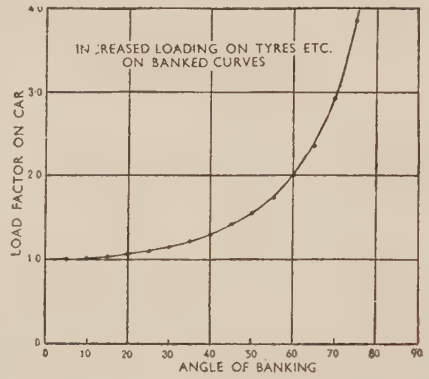
Having tentatively decided the maximum speed for which banking should be provided, the related questions of the radius of the turns and the angle of the banking must be settled. A limit to the maximum radius of the turns is likely to be set by the size of the available site for any track, while a minimum limit will be set by the acceleration loadings imposed by taking sharp corners at high speeds.

The curves accompanying this article offer some guidance in regard to these issues. The first show how, altho it is nominally possible to use any turn radius at any speed, the steepness of the required banking increases towards the vertical with every increase in speed or decrease in radius of turn. For example, a turn of ½-mile radius negotiated at 120 mph requires only a 20-degree banking; but if the speed is raised to 180 mph, or the turn radius is reduced from 880 yards to about 400 yards the necessary angle of banking is increased to 40 degrees.


EFFECT OF BANKING ON CORRECT SPEED FOR CURVES OF VARIOUS RADII
CORRECT SPEED M.P.H.
ANGLE OF BANKING
880 YARDS RADIUS CURVE
600 YARDS RADIUS CURVE
400 YARDS RADIUS CURVE
300 YARDS RADIUS CURVE
200 YARDS RADIUS CURVE
100 YARDS RADIUS CURVE
50 YARDS RADIUS CURVE

Desirable angles of banking are dependent upon the available radius for the turn.

From the spectators' point of view, very steeply banked tracks are probably desirable, as they offer spectacular racing and keep the circuit compact. Steeply banked turns of small radius are not desirable for a testing or record-breaking track, however, owing to the loadings they impose on a car. A curve shows how the loading increases as the car is put into a banked turn, just as the "g" loading on an aircraft increases in a tight turn.

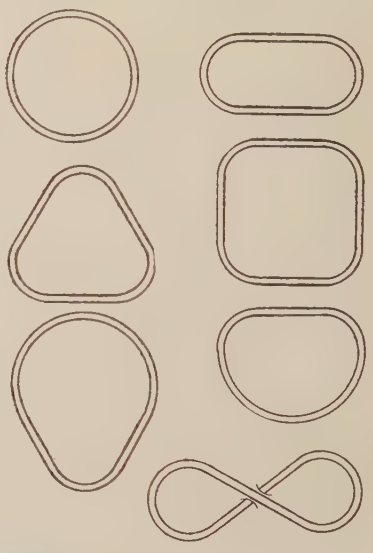



Just as the "g" loading on aircraft increases in a tight turn, so the loading on both car and driver is increased on steeply banked turns.

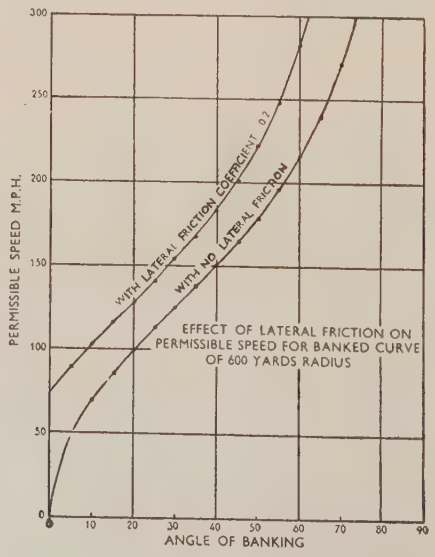
Fighter aircraft are designed to withstand high load factors in turns, the limit usually being set by "blacking out" of the pilot's vision at about "6 G's". No doubt a racing car could be designed to withstand loadings of this order, altho tire and suspension problems would be acute, but this could hardly represent normal conditions of car usage. A turn banked at 60 degrees, and taken at the correct speed for banking, imposes double the loading encountered in straight motoring, and I should regard any track using steeper banking than this as decidedly freakish.

Taking a speed of 250 mph as desirable, either on the track as built or on a track with a possible eventual upward extension of the banking, 60 degrees banking means a radius of turn of just under a half a mile, giving a complete circle of approximately three miles circumference. This gives a fair indication of the desirable size of track.

The next decision to be made is the plan form of the track. There are an embarrassing number of alternative layouts possible, some of them being shown in outline in a drawing. The shape of the available site, and the use to which the track is likely to be put, will inevitably be the ultimate deciding factor in the choice of circuit plan.



Some suggested forms of track layout dependent upon the shape and area of land available. The crossover gives a longer circuit and enforces both right and left hand turns.

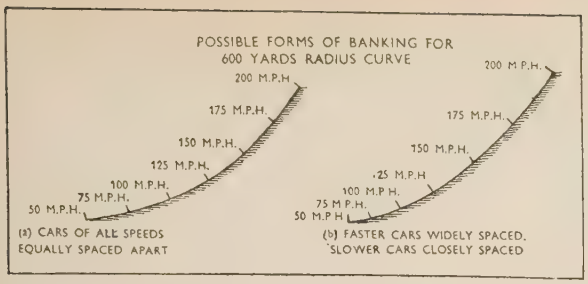

PERMISSIBLE SPEED M.P.H.
ANGLE OF BANKING
WITH LATERAL FRICTION COEFFICIENT 0.2
WITH NO LATERAL FRICTION
EFFECT OF LATERAL FRICTION ON PERMISSIBLE SPEED FOR BANKED CURVE OF 600 YARDS RADIUS

Tire friction permits speeds above the ideal for which the banking is designed.

A simple circular track is a possibility, and would avoid the problems of designing a track with smooth transitions from straights to banked curves. However, for research purposes and for standing-start record attempts, at least one straight stretch of a little more than a mile is desirable.

The logical form for the track thus appears to be the conventional oval, two banked turns of 840 yards radius, linked by two straights of 1½ miles each, giving a 6-mile lap distance on a site 2½ miles long by 1 mile wide. An alternative, which would give a longer circuit and a better spectacle in races, is the figure 8 with a flyover crossing where the straights intersect. Research workers would, however, bewail the slight gradients introduced by the flyover crossing.

With details of the plan, shape, size and design speed settled, the problem is, to a large extent, one of civil engineering.




**Alternative forms of banking for turns, governed by considerations of even and uneven spacing of cars of varying speeds across the width of the track.**

Altho the details of the design may be inconspicuous, they can do much to make or mar a track. Probably the first detail to be settled is the form which the main bankings should take.

For many years Brooklands races were overshadowed by the overtaking (passing) problem. A narrow belt of the track near the top of the banking was acutely congested, while the lower parts were almost deserted. Any new track should be designed to minimize this congestion at the top of the banking as far as possible.

Once again, a policy decision as to the width of track to be allotted to cars of various speed groups is called for. The claims of fast racing cars must be weighed against the claims of slower vehicles making use of the track for everyday testing. On this decision will depend the shape of the banking, the division of the track width between the steep banking for fast cars and the gentler banking for slower cars.

In one of the curves two different forms of banking are shown. At first glance they are closely similar, but actually are vitally different. In the one case, the change of slope up the banking is such that cars of different speeds will be evenly spread over the width of the track. The second case shows an attempt to give the faster cars more room, the curvature of the banking being adjusted so that, for example, the 175 mph line is farther from the 150 mph line than the 125 mph line is from the 100 mph line.

The design of the transition from straights to banked turns is a vital detail in track design. It is only too easy to design a track with bad bumps at the ends of each banking, or so shaped that car tends to swerve viciously at this point. Civil engineers are accustomed to the use of transition curves for blending straights into curves, but the three-dimensional version of the transition curve, which is needed with steeply banked turns, really calls for some fresh thinking.

If a new track were to be built on a well-drained site, certain advantages might be obtained by arranging for parts of the track to be slightly below ground level. Apart from providing shelter from the wind, the extent to which fast cars have to climb and descend at the ends of the bankings could be minimized by sinking the level of the turns. If the inneredge of each banking were cut down below the level of the straights, so that a car lapping at, say, 125 mph neither climbed nor descended at the ends of the turns, the track could be made much easier for fast cars than if the whole banking were above the level of the straights.

*(Reprinted from The "Motor")*

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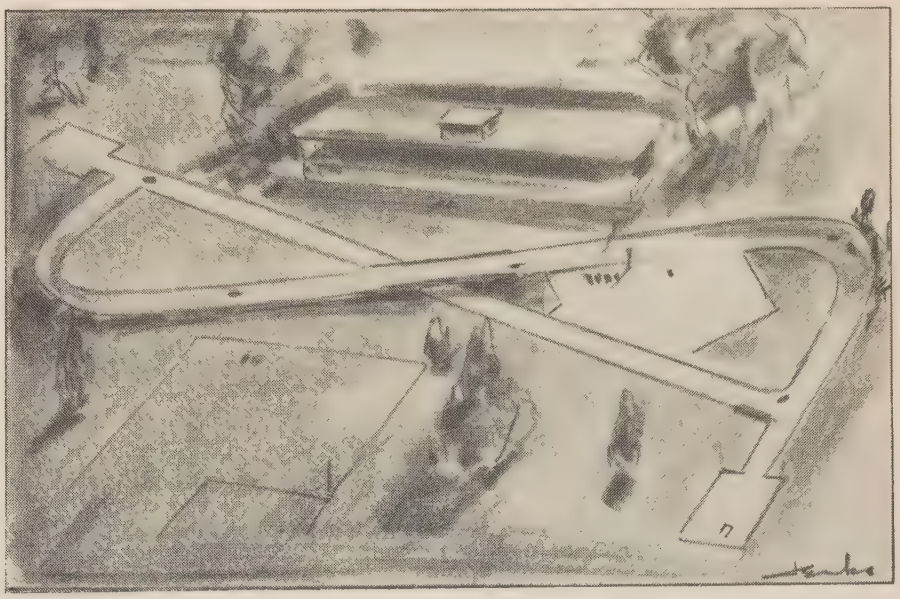
# A FUTURE SPEEDWAY

**by John R. Bond**
**Technical Editor**



Automobile racing as a spectator sport has an annual attendance close to that of major league baseball, and like baseball has been with us for half a century. However, in America, the development of automobile racing has not continued along the path of the early road races, but has stagnated to one major spectacle on May 30, plus a bewildering and disorganized array of minor local events on uninteresting little dirt ovals thruout the rest of the season.

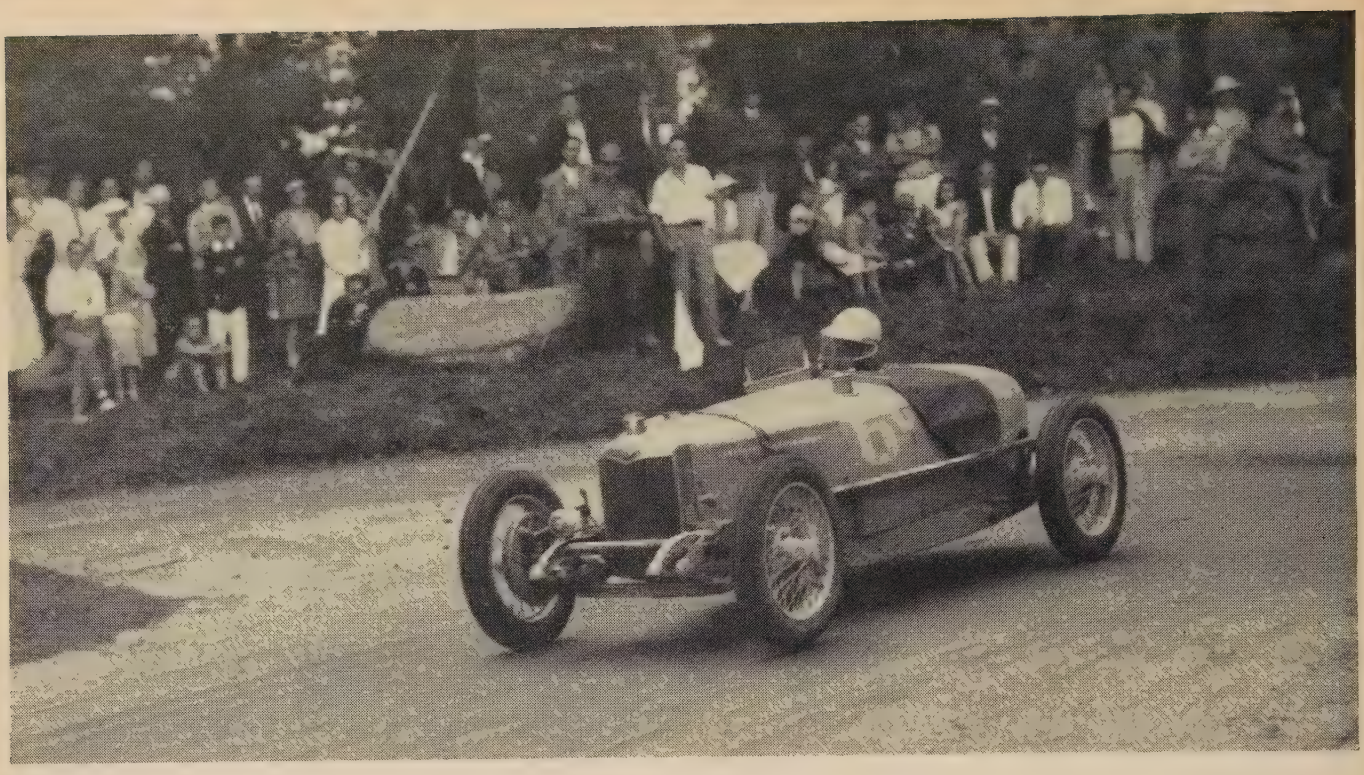
In order to "improve the breed", as well as possibly interest American manufacturers in participation; *Road and Track* suggests a new track arrangement—designed to offer the difficulties of a typical European road "circuits", with the spectator advantage of the small oval.

Basically, the course is a figure 8, requiring both left and right hand turns and thus eliminating the present stock car racing practice of rebuilding the car to take turns in one direction only. The figure 8 configuration requires a two level crossing at the junction, and the suggested minimum size shown of 1.5 miles for one lap could readily be increased to 2.5 miles and still retain good visibility for the patrons.

To tour the course, we start at the pit area, preferably from a "massed-standing" start. Contestants scramble madly into the high baked wide turn designed for 150 mph speeds and at approximately the ½ mile post, brake and shift down for the 1st right angle turn. This turn is, of course, provided with an "escape" road. After the turn it is all-out thru the gears, under the bridge, on up to perhaps 100 mph and then brakes again for the 2nd right angle (left hand this time) turn. Thru the gears again, 7000 in 2nd, 6800 in 3rd, shift to 4th and you are into the low banked turn at over 80 mph. Hard down on the treadle, over the bridge, past the pits, hold that 150 mph high banked turn, and brake fiercely to 40 mph for the first right angle turn again.

Now there, gentlemen, would be a man's race—a test of skill as well as a real test of every part of the machine—not just engine, but tires, suspension, steering, clutch, gearbox, etc. And maybe, just maybe, we might find some American car would adopt brakes that would last for more than 3 flat-out laps of this circuit, that is if the manufactures complacent management were to see what happens to their well nigh "perfect" automobiles under such punishment? And finally, what better way to test those $150 torque converters than in a 24-hour race?

We can dream, can't we?



—DAVART PHOTO

Miles Collier driving his Brooklands Riley "9" in the second Briarcliff Trophy Race, June 1935.

# ROAD RACING

## WHAT? WHY? HOW?

### LEADING AMERICAN DRIVER DISCUSSES WORLD'S GREATEST SPORT

**by Miles Collier**

Motor racing is one of the great spectator-sports of all time. It is the premier national sport of Italy. It ranks second only to cross-country bicycle racing in France. The events at Avus and on the Nurburg Ring in pre-war Germany drew up to 500,000 spectators. In this country, everyone thinks of Indianapolis, but here we find a mysterious paradox. Any observer will agree that Americans use, own, and manufacture more things mechanical, particularly automobiles, than any other people. Yet motor racing (other than sports car events) in this country is limited to just one reasonably well presented race each year, and this race, at Indianapolis, leaves most of us, the writer included, pretty well bored. Why?

The answer must be known to appreciate exactly what a *road*-race is, as compared to a *track*-race. It is natural to confuse *track* racing with road racing on the theory that both are racing events. But it is equally easy to confuse a horse and a leopard on the grounds that both are animals. Now all horses are animals, but it does not follow that all animals are horses!

Most European motor races are run, not on great wide speedways with banked turns, but on roads, even *streets*, which at all other times serve their usual and vital function of handling normal everyday traffic—your car and mine, trucks, busses and even street-cars. It is easy to grasp the enormous drama of exquisitely prepared, brightly painted machines, moving at literally hurricane speeds along a normal highway, or screaming around right-angle corners of perfectly ordinary city streets.

Sounds dangerous, doesn't it? But the record of twenty years indicates exactly the opposite. I would confidently state that, in the past twenty years, road racing has resulted in less than one-fifth as many accidents as track racing. Bear in mind that thruout the world, each year, there are about *five* times as many road races as there are track races, and that the reports of fatal accidents which I note from the publications reporting these events average about three or four annually. In this country, I think it would be safe to say that more than a dozen fatalities occur on "dirt-tracks" annually, from which it is apparent why I believe my estimate that road racing is less than one-fifth as dangerous as track racing to be a monumental understatement.

Take another example: For nine years prior to the war an American amateur automobile racing club organized and ran off between three and five full-scale road races each year at places such as Briarcliff, New York; Mount Washington, New Hampshire; Montauk Point on Long Island and at the New York World's Fair, where the streets were cleared for a two-hour period of over 100 mph racing. Since the war, the four major sports car clubs have held road races at Watkins Glen, New York; Bridgehampton on Long Island; Palm Beach, Florida; and Palm Springs, California. In all of these events there has not been A SINGLE ACCIDENT REQUIRING HOSPITALIZATION.

Yes, there were some mishaps. An average of about two per season, around one-half per event. Road racing is safe because in an emergency the vehicle in trouble can leave the road entirely. Very rarely has a following machine ever been involved in such an accident. On tracks, it is the exception if a disabled car does not involve several of the others. Road racing is safer, even though straightaway speeds are higher than on tracks, because the drivers know that on turns, bumpy surfaces, etc., they must either slow down or leave the road.

Nobody ever won a road race by driving off the road, therefor even the big professional "Grand Prix" drivers, who hit up to *two-hundred mph* on the straight, have no hesitation in slowing to *twenty-five mph* on a hairpin turn! Obviously, if they did not, they would skid ignominiously off the road, bend their expensive machine and have to walk home. It *has* happened, and nothing is more ludicrous than to see a great 400 HP machine, traveling at about thirty mph, slide quietly all the way across the paving, and fetch up against a hay-bale with a thump. Note that figure, *thirty* mph. This is another secret of road-racing safety. The little errors of judgment that spell disaster are almost invariably made at difficult points on the circuit, where speed has already, perforce, been reduced. Most wrecks occur in road racing at speeds which are already so low that the driver's injuries are usually confined to a bitten tongue!

Road racing differs from track racing in some very vital ways. The average road will not allow the side-by-side cornering of two cars because it is too narrow. Hence,

in road racing, the drivers duel it out on the straight, and the one ahead at the entrance to the corner—at the "cut-out" point, where the drivers take their feet off the gas and start working on the brake pedals —has the sole right to the entire width of the road in the corner. This results in cars "peeling off" for the corners, and taking them one by one.

On first thought, you might think the drivers would still be arguing when they look up and discover themselves in a corner together. In practice though, this is a very rare occurrance, and if it ever has happened, it probably resulted merely in the driver of the outside car "taking the escape road". Track devotees, I find, do not know what an "escape road" is, and it should be added that a safe circuit should be provided with them. At the end of every straight, the road should continue on beyond the corner for a reasonable distance, providing somewhere for the over-bold to go in the event that the corner's "cut-out" point has been misjudged. Escape roads are fairly well patronized during the practice period, by seasoned, as well as by green drivers. That is what the practice period is for—to enable all to select their own cut-out points, so that in the heat of the race itself, their predetermined procedure shall be dead accurate in respect to getting the car down from over 100 mph to the thirty-five or so at which the corner must be negotiated. In road-racing, the trick is to ascertain the maximum speed at which any given corner can be taken, and then to work out by really scientific means, the point at which one must begin slowing down for it. Then, by manual skill and smooth precision, to get one's car back up to top speed for the next straightaway, in the MINIMUM time again. Obviously this calls for far more skill than it does bravery.

Note too, that it demands much more of the car. American track-cars are dull because they are not designed to do anything but go like hell. Let me show you a car that not only goes fast, but stops on command like a polo-pony, that will steer like a well trimmed racing sloop, that accelerates like a rocket boosted with "Jato." Now we are looking at a motor car that must do what your car and mine are made for. Now we are talking of pick-up, braking, and things which every American talks of. In road racing we are NOT concerned with just speed, speed, speed.

A simple comparison of a cleared, adequately policed, one-way circuit, open only to cars which have been engineered and inspected for the race, driven by drivers who have been licensed as to physical condition and experience, may be easily made with conditions on a normal arterial highway on a Saturday afternoon. On the latter, one-half of the traffic proceeds to hurl itself headlong at the other, some cars cut in without warning from side streets, hot-dog stands and curb-side parking spaces; many of the cars have unsafe steering, almost no brakes and very limited visibility, and the drivers . . . . well!

When automobile racing takes place on normal roads, we will see the most spectacular, the cleanest and most valuable spectator-sport in the world achieve the respect in America that it already has abroad.

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". . . to see a great 400 HP machine ,traveling at about thirty mph, slide quietly all the way across the paving . . ." —THE "MOTOR"

# ROAD RACING AND BIG ENGINES

*Miles Collier began his racing activities in the early thirties, placing third in the Briarcliff Trophy Race of 1934 in a Brooklands Riley. He raced the same car in 1936 but switched to a super-charged model PB M.G. Midget for the first "Round-the-Houses" race at Alexandria Bay, New York. Collier ran the M.G. in 1937-1938 in this country and during 1939 ran in both this country and at Le Mans. In 1940, he drove a Buick-engined "monster" in the road race at the New York World's Fair Grounds. A stock, but blown, M.G. TC was used at Watkin's Glen in 1948. Collier drove a bored and stroked Mercury-engined Riley to victory in the 1949 Watkin's Glen Grand Prix. He also placed this car in the Bridgehampton and Palm Beach races.*

*Presented below is Miles Collier's answer to the "Opposed to Big Engines" side of the controversial "Formula For Sports Car Racing" editorial which appeared in the March 1950 issue of ROAD and TRACK.*
*—Editor*

The revival of road racing in this country has been wisely said to depend on the safety record of the present series of events. Fortunately, the record has been astoundingly good. Astounding, however, only to those familiar solely with track racing.

The moment you begin to deal with people who know road racing, the question of an engine displacement limitation ceases to have much application to safety. True, in the great European Grand Prix where ALL the cars were up to an equal standard of efficiency, and ALL the drivers fully experienced and skillful enough to keep their machines up to pretty near the limit of their capabilities; then, and in those circumstances, a reduction in horse-power will effect some reduction in hazard. This is the basis for the displacement limitations which have been imposed many times in the past.

The reasonable tendency among us now, to consider this a means to achieve more safety, does not excuse our failure to note that in THIS country, at THIS stage of the development of road racing, an engine displacement limitation would accomplish little in itself. What is needed first is education and control of the drivers, and next, development of safe road racing cars. Without these two safeguards, we can accomplish a very adequate formula for tragedy with a couple of M.G.'s, and nothing else.

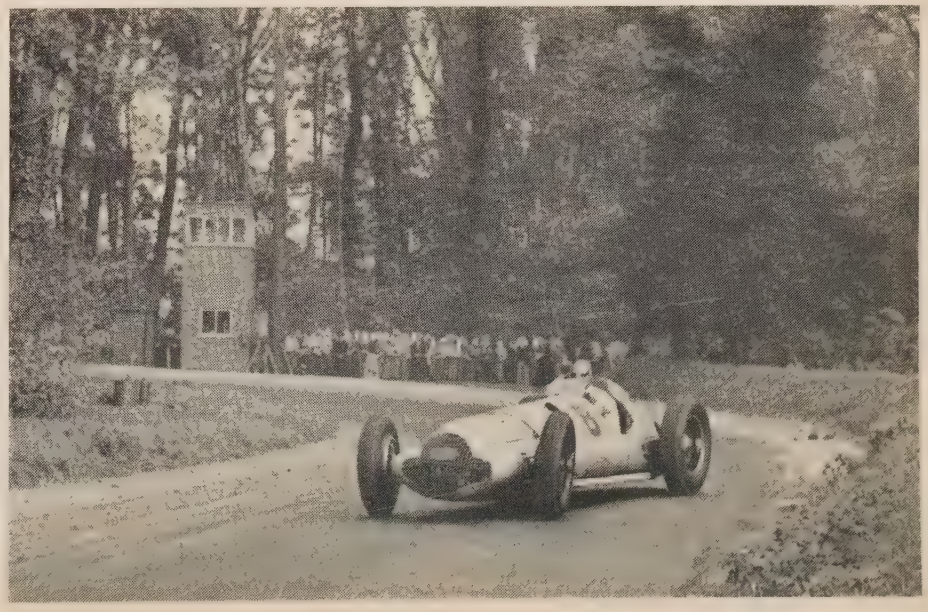
The constant use of the word "amateur" in the *Road and Track* editorial brings me up. Not that the term is not proper, but the misuse of it to imply "inexperience," "carelessness," "a superficial attitude" or "inferiority to the great personages of American track racing" is too much.

The only accurate application of the word "amateur," insofar as American road racing is concerned, is "one who is not paid."

In this country today, any one of some six or eight "amateur" drivers can and have defeated native-born professionals ON ROAD CIRCUITS. This is not to imply that the professionals could not beat the pants off us on their own ground, such as a dirt track or at Indianapolis, where the inadequacy of the track imposes a multitude of special problems that cannot be duplicated anywhere else in the world. But again, road racing is one thing and track racing something else. There ARE NO native-born professional road racing drivers in this country today, and the American Automobile Association, which controls a large part of professional racing, actually is very uninformed with respect to road racing, its technique or management.

AAA has seen fit to abandon road racing in this country. What reason they can give for this has always escaped me. But the fact remains that from 1933 to date, road racing in this country has been handled entirely by "amateurs" and during this period no less than sixteen major road races have been held on public and semi-public roads, not to mention a score or more of minor road races, WITHOUT A SINGLE ACCIDENT REQUIRING HOSPITALIZATION. Until some professional group can at least equal that record, it goes against the grain to "consider the danger to spectators and contestants alike when an ama-

*(Continued on page 35)*



# The Esthetics of

On Wednesday, April 12, at 8:30 p.m., the Department of Architecture and Design of the Museum of Modern Art conducted a symposium in the Museum Auditorium entitled "The Esthetics of Automobile Design." The following panel members participated:

*Moderator*:

PHILIP C. JOHNSON
Director of the Department.

*Speakers*:

J. M. CRAWFORD, Vice President, General Motors Corporation.

WILDER HOBSON, car owner and licensed driver.

RAYMOND LOEWY, design consultant for the postwar Studebaker.

GEORGE NELSON, architect and industrial designer. Well known for furniture design.

D. CAMERON PECK, collector of fine automobiles, President, Antique Automobile Club of America, President, Sports Car Club of America.

HOWARD DARRIN, designer for Kaiser-Fraser.

Following is a digest of the points of view expressed by the participants.

*Moderator Johnson:*

I think I am an excellent moderator because I am on both sides of what I hope to be a cleavage tonight. I just bought the most wonderful car in the world last week—a Buick. I bought it for the same reasons people buy cars in this country: it is a very powerful car. The car turns on a dime, goes 80 miles an hour when I think it is going 40. I have been arrested 3 times. At 10 below zero it starts off right up the hill, and I don't miss my train. And next year I will get a good trade-in. What more could you ask?

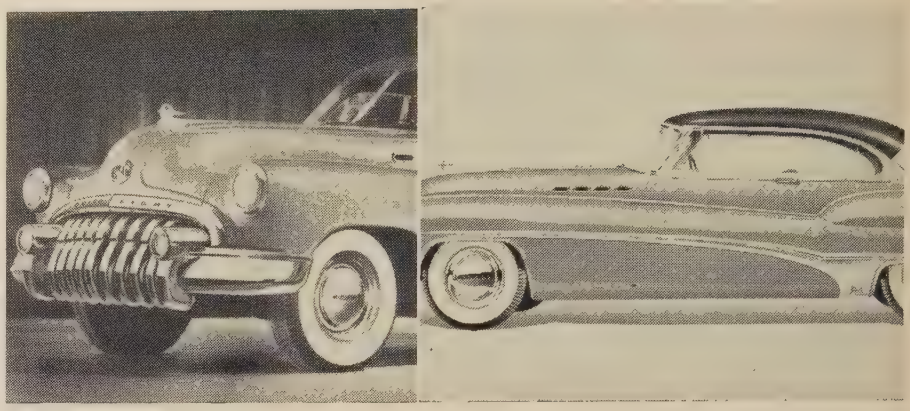
But on the other side I find I have to be very polite and take my hat off when I get in the door, or it will knock it off for me. And it would be a little better if I could see the right fender, because it is all scratched up. Moreover, I find the Buick car the ugliest object I have ever owned. My friends say to me, "I don't see how you can have that thing in your front yard!" You feel embarrassed to have your personal possessions criticised like that. It is a situation which might lead to serious psychotic disturbances, because, on the one hand I really love it, but on the other I do have reservations—that mouthful of teeth, and the extended bubble gum along the side!

*Wilder Hobson:*

I am here to grind 2 axes: the axes of honesty on the one hand, and grace on the other. According to Aristotle: "A good style must first of all be clear. It must not be mean or above the dignity of the subject. It must be appropriate. "The little MG is an example of honesty: simplicity, economy of line, no pretentiousness, no excess decorative package. One of the striking things about it is that it looks exactly like the kind of automobile it really is. It is easy to maneuver, it has excellent visibility for the driver, it looks like an automobile.

But on the streets I find torpedo-like contraptions that look as though they were aching to be off in the limitless spaces of the more scientific comic strips. Another feature is the tendency to make it exceedingly difficult for a service man to operate on the car.

To vent a few private prejudices, I don't care for station wagons painted to look like wood. I don't like huge hoods containing relatively small engines. I don't see why.



". . . . . on the one hand I really love it, but on the other I do have reservations—that mouthful of teeth, and the extended bubble gum along the side!"

I see no point in cars with coats of arms on them. These are dishonesties.

As for grace, it is achievement in the form which draws from and suggests the fluid and harmoniously proportioned elements in nature. There is no reason why the general American type of body design should not result in a graceful product if enough people care about grace. It is not necessary to elephantize the bumper. Perhaps the public likes it, but it has not had a chance at anything else. I hope that American designers will aim for future prospects.

In the Cisitalia, a small, low car, there is nothing in its good proportions that is impossible on a larger scale. The upward flow of the fenders and downward flow of the hood is a singularly beautiful balance of curves. You can see the wheel; it is used as a definitely decorative stroke.

*J. M. Crawford:*

I am here to present the automobile engineers' research approach to the problem of improving the appearance of the modern motor car. I am not taking a defensive position here. Rather I feel that a better understanding of the problems and contributions of the engineer is necessary.

The engineer has always had responsibility to lay the groundwork for safe, comfortable and efficient individual transportation, to sell in the price bracket determined by the management, and that can be produced at a profit to the stockholders. But in the early '20s, due to competition, stylists or industrial designers were employed to improve appearance. But this does not mean that the automotive engineer must not constantly increase safety, comfort, efficiency and utility in spite of changes in appearance.

First to consider: performance characteristics, package size, price bracket. Engineering work is based on development, test work, field experience. In this way the engineer is responsible for chassis and overall car design; the stylists for esthetics of car design. Next, management, engineers, sales executives and body-producing facilities review decisions of stylists. This calls for a period of adjustment of viewpoints to lead to the production program.

Recent models compared with prewar designs show greater balance and harmony between the hood and the trunk; seats have been moved downward and forward, the engine itself has been moved forward, the roof is down and forward. The fixed weight of mechanical units must be considered: over 50% of total weight must be on the front wheels for safety.* The variable weights, passengers and luggage—must be considered for good balance between both. These have worked out so that the loading of the car will have very little effect on its handling or riding characteristics.

The engine design has a very important effect on over-all car design. Height of hood is determined by the clearance between the sheet metal and the air cleaner. Height, width, forward weight, road clearance, position of radiator dependent on efficient cooling, all determine design. Over-all height is somewhat determined by the relation of the driver's eye to the bottom of the windshield. Thus the very considerable weight of the power plant is a governing factor.

Seat height and position have their influence: the seat must have a certain relation to the belt line—the bottom of the windows—for comfort and for driver's signals. The top of the seat and the roof rail must be related for easy entrance. The center pillar must allow visibility and signaling. Here the engineer and the stylist co-operate for maximum comfort and greatest eye appeal.

In addition, safety limitations are imposed by law: headlamps are at a fixed distance from the ground; shape and size of headlamps are standardized; license plate mountings are controlled, etc.

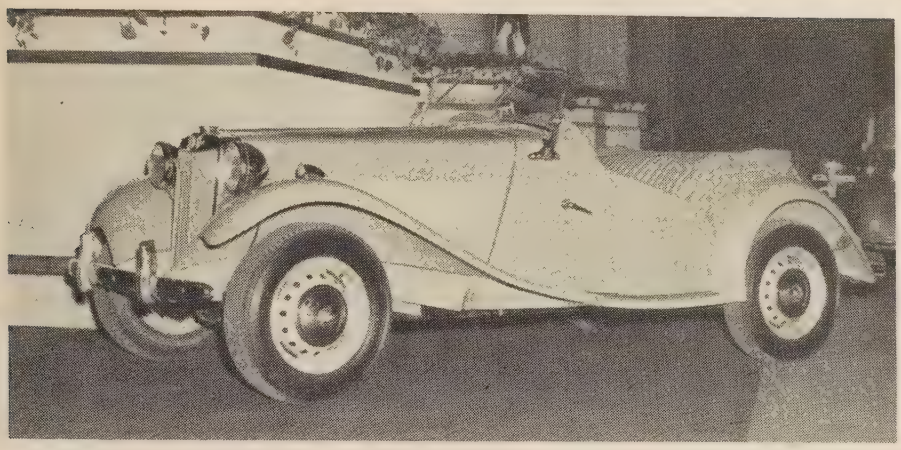
Customer Research is an established method for learning the customer's viewpoint on design: a representative sampling of the car-buying public.

The major objective is the development of safe, comfortable and efficient individual transportation with enough eye appeal to make the owner want to trade in his present car for a new one.

*D. Cameron Peck:*

Ever since man first eased his weary legs by riding over earth's surface on wheels, his vehicles have been created and embellished with all the skill and artistry at his command. There are three fundamental factors in the esthetics of road vehicle design that are seldom mentioned: 1) the wheel, an eye-satisfying circle, is the most important feature of its design; 2) the vehicle, being for use in a horizontal plane, shares with architecture an inescapably horizontal base line and, with wheels forming a parallelogram, its basic shape will be rectilinear; 3) the vehicle is directional, point-

# Automotive Design



"The little MG is an example of honesty: simplicity, economy of line, no pretentiousness, no excess decorative package." A recent modification to the newly introduced TD model provides B.M.W.-type holes in the disc wheels to cool brakes, to reduce weight, and to improve appearance.

ed towards its owner's destination, hence should look as if it would go even when at rest, with front advancing end clearly differentiated from back trailing end.

Car design has its roots in centuries of slowly perfected horsedrawn vehicles. Even the earliest designers were concerned about esthetics because of criticism that they were replacing that beautiful animal with an ugly metal box. By 1901 the component parts of the motor car had assumed relative positions in the chassis which they still occupy, and the 1901 Mercedes, the most advanced car of its day, was a pattern which others copied in succeeding years: a lengthened wheelbase and a neat hood and radiator, flared front fenders adding a feeling of motion, a striping scheme providing a repeating rhythm of accents from front to back. The classic straight line formula reigned supreme for another 20 years.

The bulbous Buick of 1929 and the airflow Chrysler of 1933, with much talk about streamlining, heralded the arrival of the present automobile design formula, based not on straight lines but on curves. The new school reduces the badly needed horizontal emphasis to the truncated base of the bubble plus applied ornamentation, as in the 1950 General Motor cars, heavily belted with chromium and giving the effect of divorcing the top part of the body more and more from the bottom thus destroying design unity. Grotesque dentures in front are framed by a stretched out chromium lip as though fingers had been inserted in the corners of the mouth like when a child pretends he is a tiger. So little of the back wheel is visible that the implied sense of motion of a rolling wheel is entirely lost. From the side, there is no clear feeling as to which end of the device is the front.

The Kaiser Special emphasizes a quality common to most of the present day designs: its effect is bloated and overweight, quite inconsistent with the litheness required for forward motion in a horizontal plane. Mr. Loewy's Studebaker is noticeably cleaner than many current models, being quite innocent of meaningless chrome ornamentation, and less bulbous in effect, with the top line paralleling the base line for a good horizontal emphasis. The front end is far better than most of today's grinning masks, but one may question whether or not an automobile still earthbound should look like a jet fighter. But, the sweeping sheer line from front to back and the rather flat top binds the vehicle to earth while its reaching lines suggest speed and motion.

The "curvilinear school" may have something when they get back to certain fundamentals as is evidenced by the Ford. The front end is several degrees less objectionable than the Buick, although still too heavy in feeling. The body sides are clean and swooping, not overly convex although sadly split by a chrome strip. Unfortunately the Mercury and the Lincoln are not nearly as well done—true bubble boys these, and with each increase in price the customer receives an increase in the amount of meaningless design-negating chromium.

The Cadillac has a certain *nouveau riche* glitter and is not ungraceful in spots, but the alarming chromium bandaged wound at the front of the back fender virtually cuts the car in two, a horrid sight.

The Nash covers the front wheels as well as the back making it look rather like a quonset hut standing on 4 naked white feet, so that what does show of the wheels seems almost immodest. The front grille design is satisfactorily symmetrical but overemphasized by its heavy chrome frame. Good points are the continuous sweeping belt line unifying the design and the unmistakable and business-like hood. At least one knows which end of this car comes first.

*Howard Darrin:*

I would like to try to explain that it is a little more difficult to build a car than it is to take it apart and criticize it. I would like to show you the apparent reason for the European cars having a better appearance than the American cars. European cars are custom-built, built by hand. A designer designs one car, builds it,, and it is on the road. In America it costs about 100 million dollars to build a car, and if it isn't what the public will buy, we are really sunk. The stylists are really behind the eight ball because they are brought in to decorate what is already done by the engineer. That is why I want to be a "body architect" to work on the whole thing from the beginning.

(Mr. Darrin's subsequent comments largely related to slides he showed, demonstrating that design elements he first used 20 years ago appear in his most recent cars.)

*George Nelson:*

I am going to consider the automobile as an art object, a very complicated art object which is made up of many smaller subjects such as grilles, lights, radiator ornaments, etc. Eighty very well selected chose-ups of these units were shown on slides. The point of this very witty talk was the ridiculous appearance of most American cars.

*Raymond Loewy:*

As designers we are anxious to follow the limitations outlined by Mr. Crawford because we know that in doing so we will automatically reach our one and only goal: to give the American public the kind of automobile they want, thus creating mass manufacturing, mass sales and mass employment.

As a designer, I am on a spot because I think the American roads are covered with monstrosities. They are automobiles that are practically obscene and an offense to anyone that has any taste. I have been against that kind of design all my life.

There is a difference between designing one special sports job built for two on a long wheel base with a long hood to sell for $5,000 to $20,000 and designing a sedan with leg room, head room, width, comfort and done inexpensively and at the same time safely.

You pay 90c a pound for steak, 70c a pound for butter, and your car costs you an average of 68c a pound. The English pay $1.50 a pound, the Italians $3.30 a pound. It takes nothing short of American technological genius and engineering and business sense to make this possible.

The Europeans can't get in the car with a hat on. They sit on the floor with their legs stretched under the hood or their knees under their chins. Europe is at present where we were in America at the time of the Vanderbilt Cup; driving is a sport, not mass transportation. American designers never have the luck to be assigned the problem of a 2-passenger speedster to sell at $5,000 to $20,000. If we were to get that kind of job, we would make these foreign cars look like a 1920 Mack truck. If it is dishonest to put a small engine under a large hood, that is just what the MG does, for a large section of the space is used to store the customer's feet, so the hood is a fake, and Mr. Hobson has been hoodwinked. In America customers insist on riding in the body on seats; they refuse to ride under the hood!

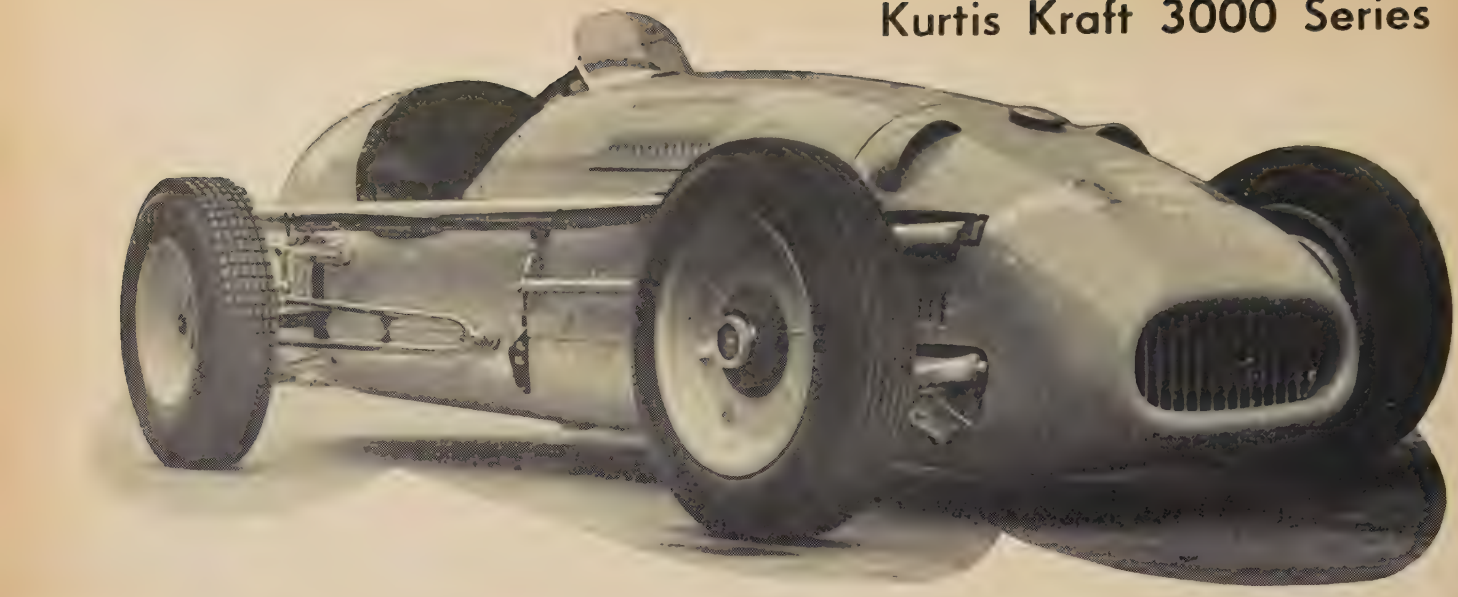
The Cadillac to me is a beautiful car with balance and no vulgarity. I had nothing to do with its design.

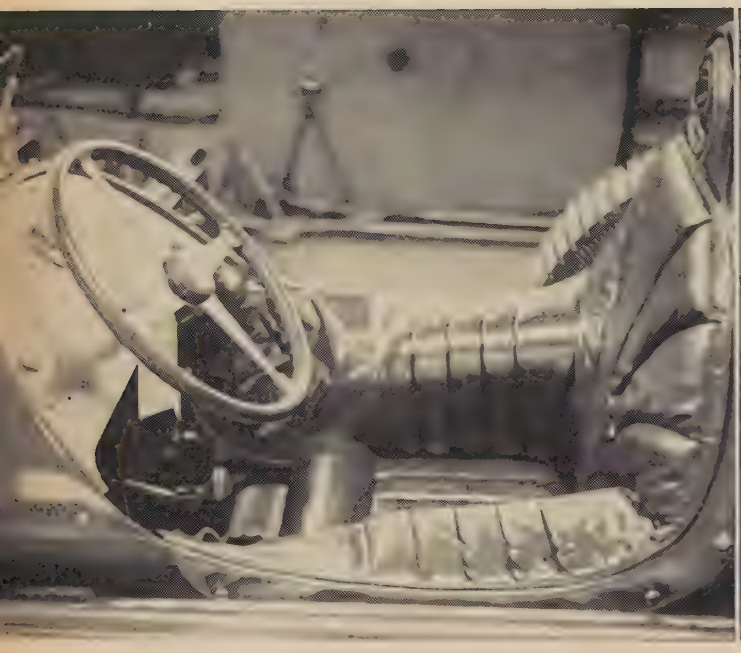
The Cisitalia was built by men of taste. It has grace and it has balance, but it is a special sports job. Unfortunately there is no mass market for that kind of automobile here. Americans want to carry more than 2 passengers and they want more head room. If the Cisitalia were to be proportioned larger so it could take 6 passengers, the car would get to be ugly.*

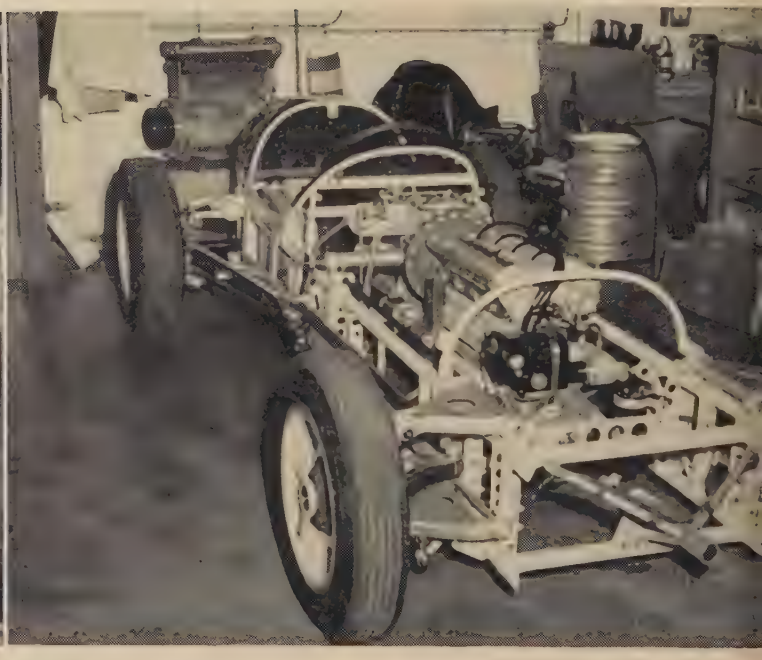
The Oldsmobile I consider to be the most advanced power plant in the world today. Its new rocket engine is respected and admired as a great engineering feat by every automotive engineer in the world. It is quite a job to house a thing like that in a hood, yet its hood is quite small, a masterpiece of designing.

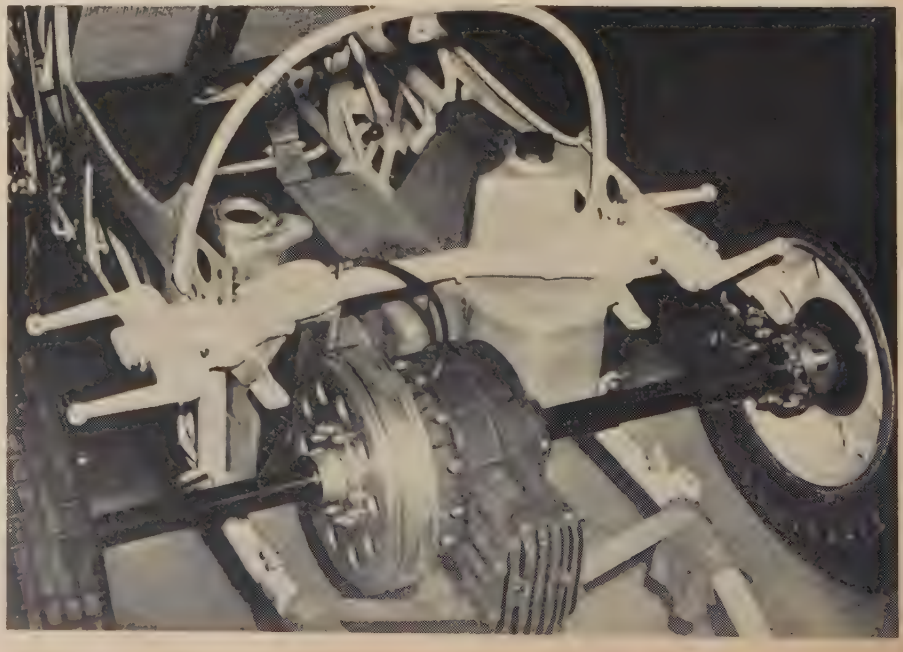
*(Continued on page 36)*

# Kurtis Kraft 3000 Series







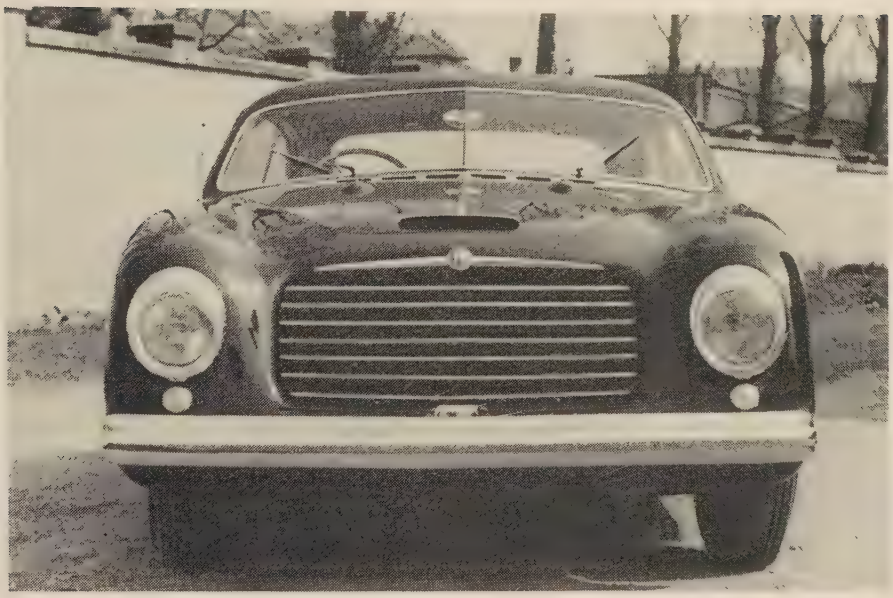


Not since the Miller front-wheel-drives of the '20s have series-production speedway race cars appeared at Indianapolis in strength. The new "3000 Series" Kurtis-Kraft is making a strong start toward this goal, however, with a group of five entries in the 1950 event.

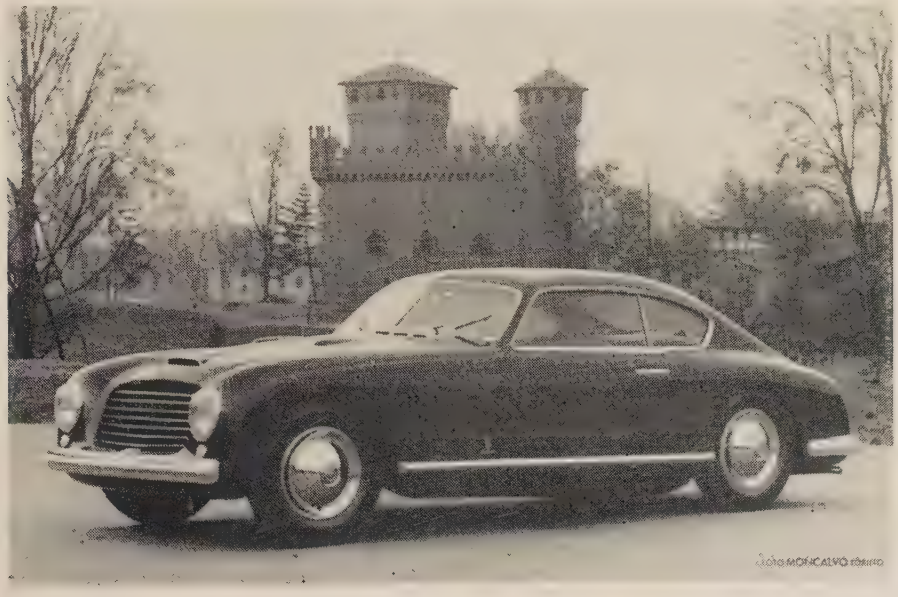
Altho special design consideration for use in the "500" were paramount, these cars may also be used on the larger tracks. The chassis is based on a deep-truss tubular frame not unlike current European practice. High mounted torsion bars provide springing at both front and rear. Wheelbase is 100 inches. The car weighs approximately 1650 pounds with the Meyer-Drake 270 engine and 1030 pounds less engine and accessories. Tail and seat fuel tanks provide a total of 53 gallons capacity.

The body has a very striking frontal resemblance to the British B.R.M. Grand Prix car. Price ranges from $14,900 to $20,000, depending upon choice of powerplant and other optional equipment.

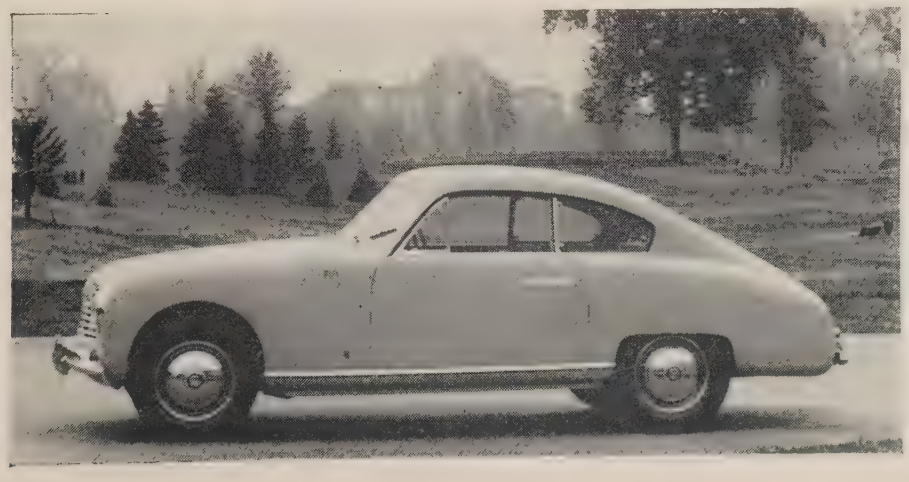
# Pinin Farina - 1950



The beautiul new Alfa Romeo 2500 Sport Special, first shown at the Geneva, Switzerland, Automobile Show, features latest Pinin Farina five passenger coupe with new frontal styling.



Fiat 1100 Sport, below, also shown at Geneva, is two passenger coupe with typical Farina body.



SALON

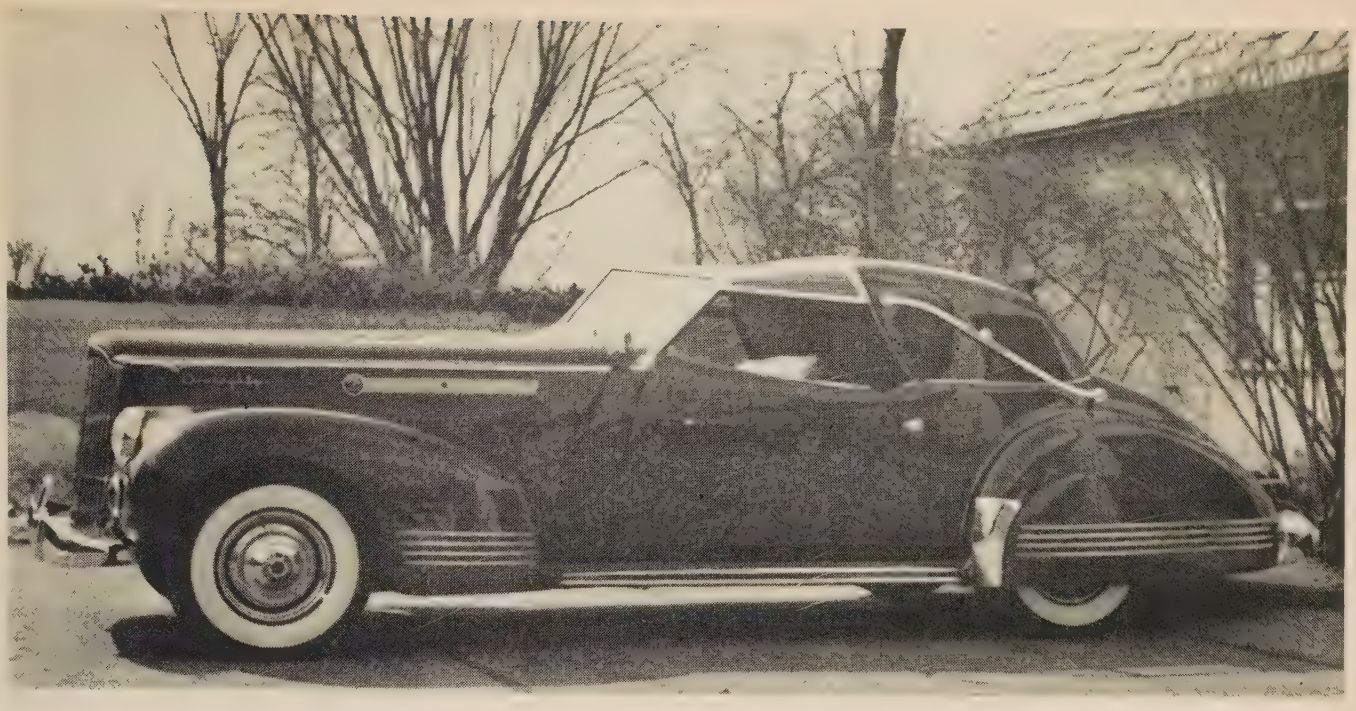
R. M. V. Sutton, chief test driver for Jaguar, in the XK-120 just prior to setting a record of 132.596 mph on the Jabbeke-Aeltre super-highway.

# *Jaguar XK-120 Successes*

Cadillac and Lincoln owners' opinion to the contrary, cars capable of a *genuine* 100 mph are today in the minority. For a production model car to exceed this figure by over 32 mph is indeed an outstanding feat. The Jaguar XK-120 averaged 132.596 mph over the flying mile at the Jabbeke-Aeltre road near Ostend, Belgium, on 72 octane rating fuel.

In competition at the Silverstone Production Car Race last year, the XK-120 driven by Leslie Johnson won first place at a speed of 82.06 mph. Second place was also won by Jaguar, Peter Walker driving. A tire failure forced B. Bira, in the third XK-120, out of the race while leading.

Leslie Johnson, winner of the Silverstone Production Car Race, cornering in the XK-120. Damage to the front fender was caused by a minor collision with another car earlier in the race.



# Packard Test Car

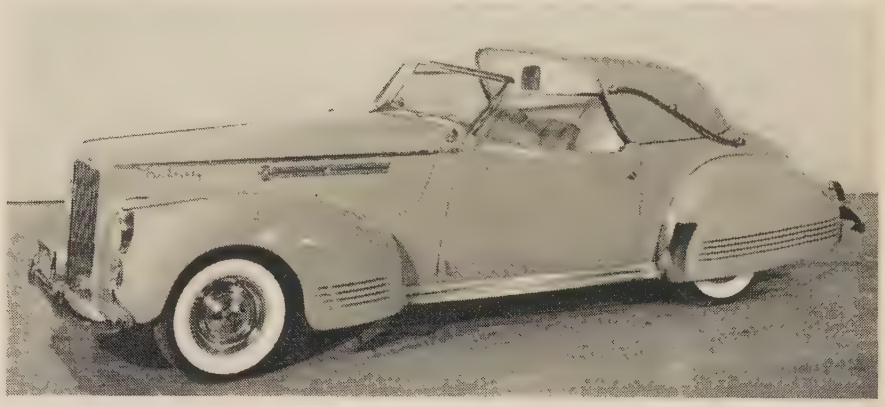
One of the most interesting phases of automobile design is the construction and testing of experimental cars. The Packard "Mobile Laboratory" test car began its life as 1941 Packard "180" featuring a special Coupe de Ville body.

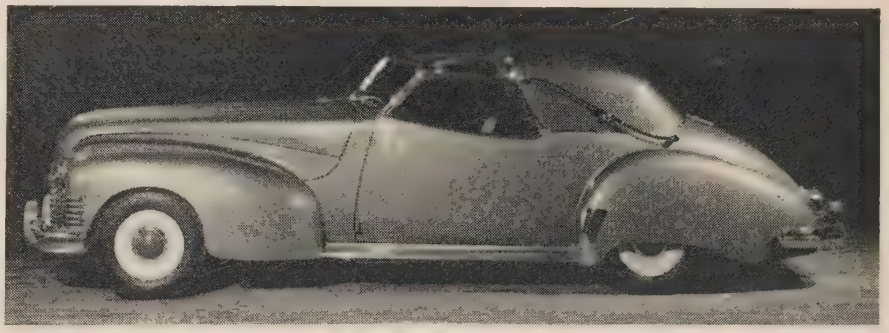
Driven by Mr. Edward Macauley, Packard Director of Styling, this car has furnished normal transportation concurrent with experiments. A wide variety of mechanical equipment, including refrigerated air conditioning and automatic window lifters, has been installed and studied.

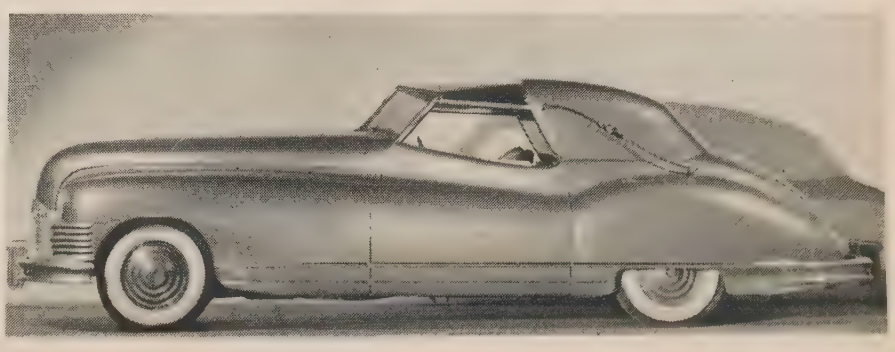
A series of modifications have carried the Mobile Laboratory from a conventional "car-with-fenders" to a full-width all-enveloping type.

The original top design, which gives the car an interesting Continental appearance, was continued on the various versions with little change.

At present, the car is "under wraps" while new modifications are being made. What they consist of is a deep dark secret, but will no doubt, incorporate the principal features of the 1951 or 1952 Packard line.





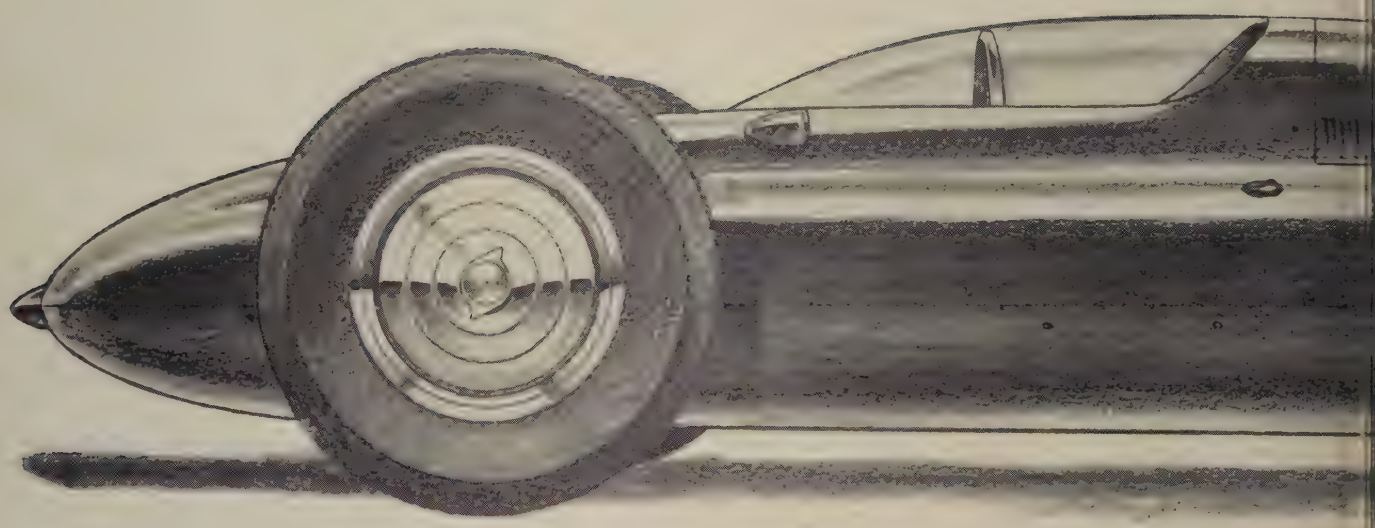


TOP — The original 1941 test car, very stock in appearance except for the special Coupe de Ville body.

NEXT — Later in 1941 the color scheme was changed and certain mechanical modifications were made.

NEXT — The 1944 version represents a transitional stage in styling.

AND BOTTOM — Current style fenders, along with redesigned hood and grille, gives the "new look" to the 1948 version.



# DESIGN FORUM

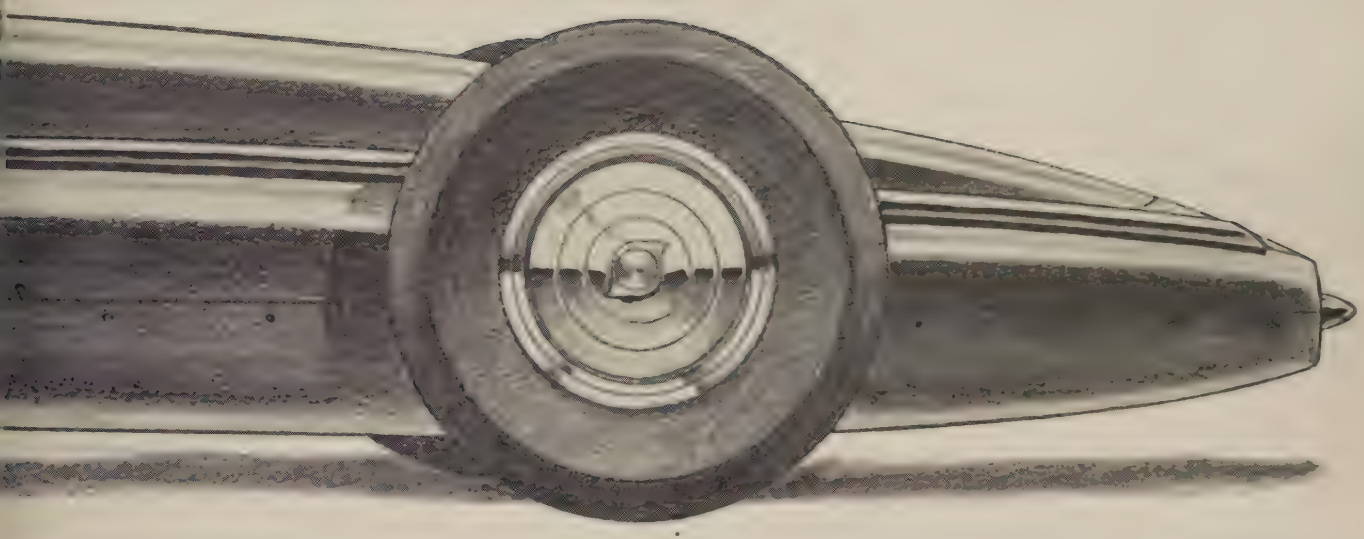
## A FUTURE RACE CAR FOR INDIANAPOLIS "500"

**Number 8 of a Series**

**By Bill Jenks**

The Indianapolis 500-mile Race is
races. Rather than a duel of car a
bravery, the "500" is a test of endu
driver and his mount. Once a car is
the speed, and the driver develops th
tain the pace, the eventual success is

This being the case, driver fatigue
sideration for the modern speedway
engine at the rear, much of the nois



ong speedway a match of t of both the f maintaining cessary to at- of stamina.

r design con- Mounting the heat, and vi- bration is eliminated from the cockpit. The extremely low center of gravity allows turns to be taken with less strain on car and driver. A novel feature of the ultra low design is the protection provided the driver in case of a crash—the wheels are almost as high as the body.

A fully inclosed cockpit eliminates strong air-blasts, a very fatigueing element of speedway driving. Air conditioning provides the driver with the best possible conditions for concentration on the job at hand. The cockpit canopy is jettisonable and overturn bars are built in. Automatic 2-way radio provides constant contact between driver and pit crew.

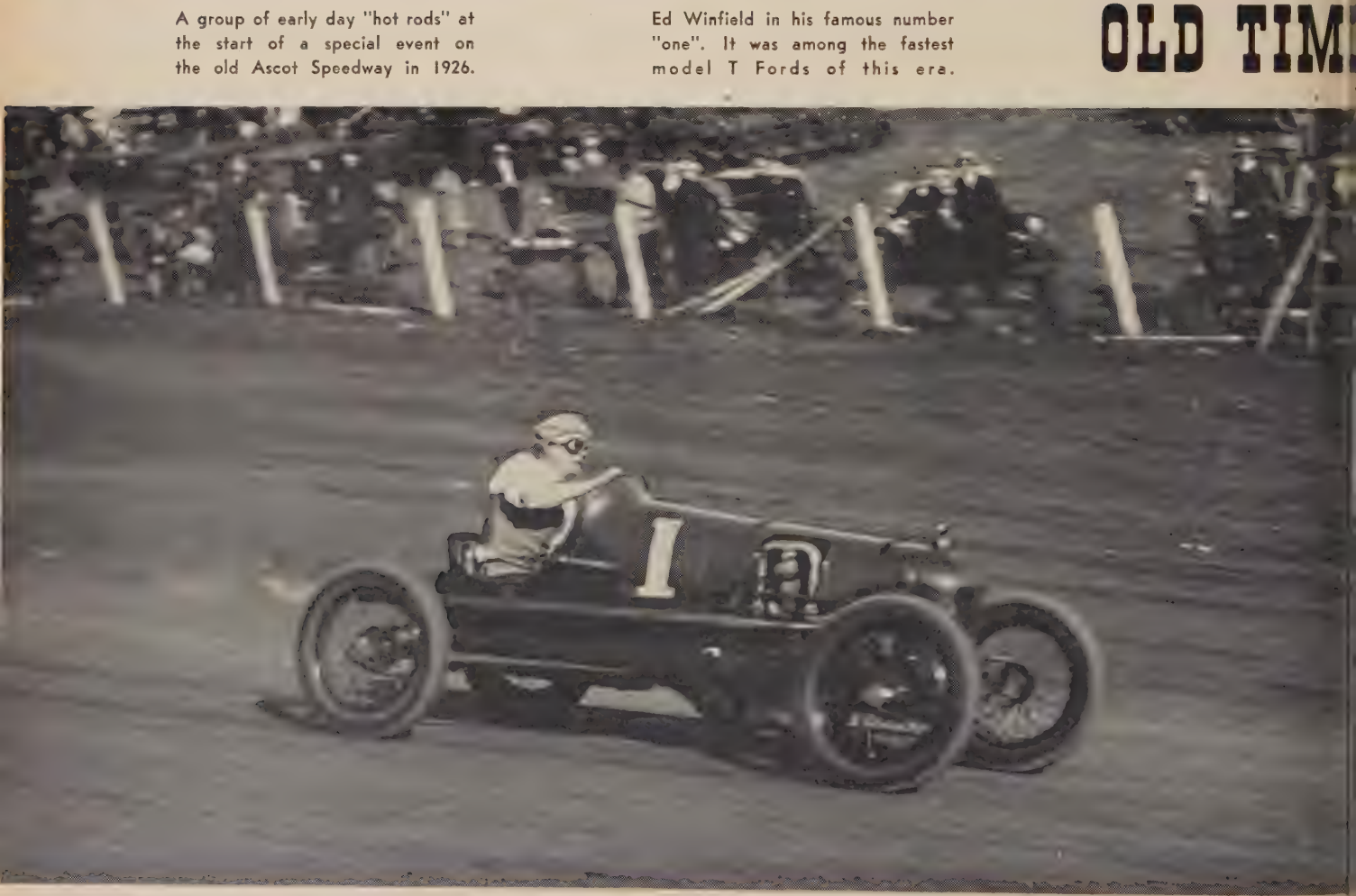
Air for cooling is drawn in thru the nose and is expelled at the tail. The tubular frame carries coolant liquid from the radiator to engine as on the Auto Union. Fuel tanks are located on the C.G.

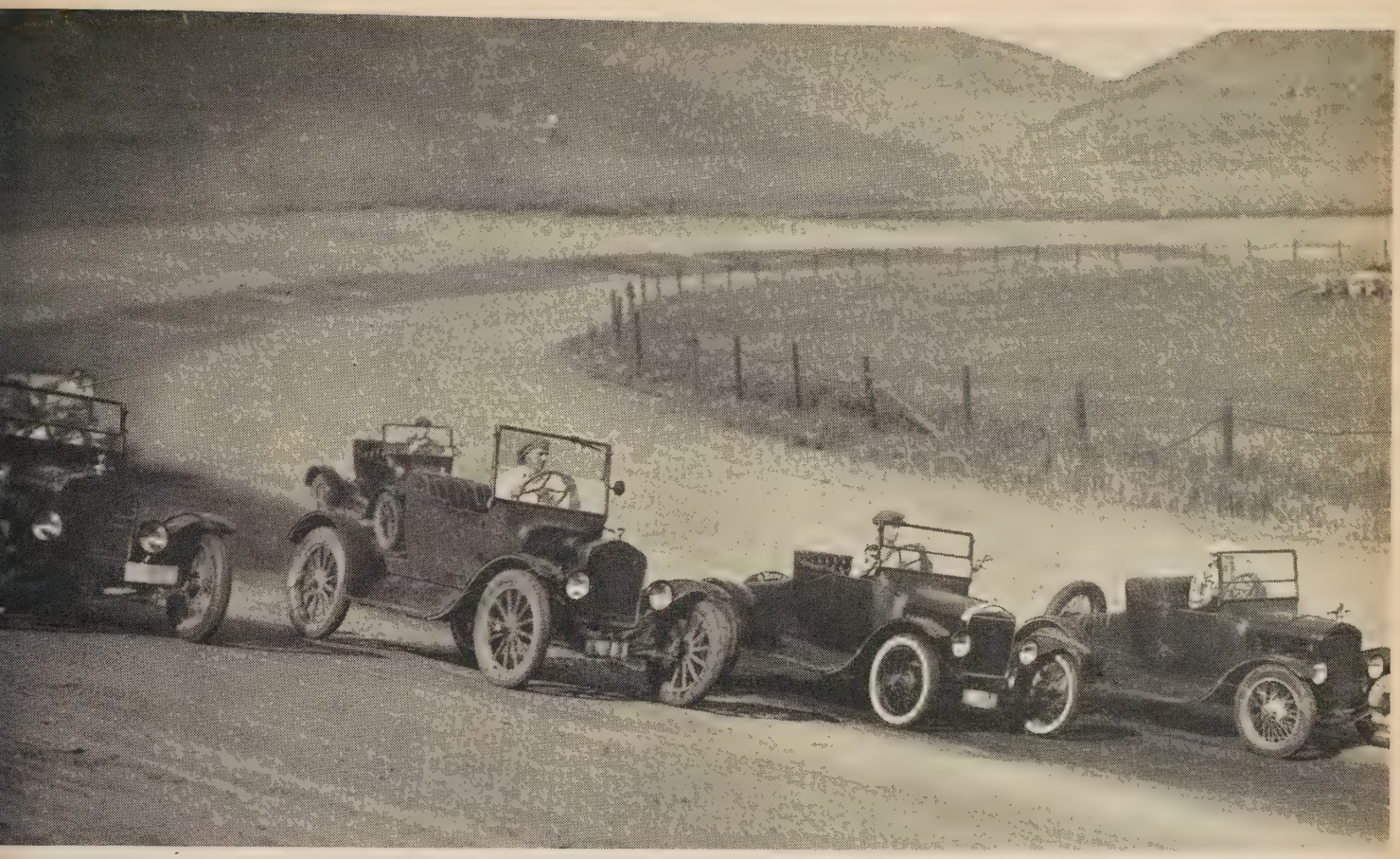
Built on a 100" wheelbase, the same precise engineering, and construction that was employed on the pre-war German Grand Prix cars would be necessary to assure success.

A group of early day "hot rods" at the start of a special event on the old Ascot Speedway in 1926.

Ed Winfield in his famous number "one". It was among the fastest model T Fords of this era.

# OLD TIM





# LACING AT ASCOT

BELL AUTO HISTORIC PHOTOS

## An Interview with Ed Winfield

During its existence, Ascot Speedway was probably the most popular and best known speedway in the country, excluding Indianapolis. Film stars and celebrities attended to watch the colorful events. Auto racing of this era was much better organized than it is now.

In addition to the regular programs, Ascot staged many special events. Among the more popular of these were the Model T roadster races or, as they would now be called, "hot rods." Speed equipment was available for the Model T to an even greater extent than is offered for the present V-8. Many concerns built special carburetors, heads, manifolds, etc. (see ROAD and TRACK May, 1950).

In the first event ever staged, Ed Winfield rode as mechanic with Fred Frame. His hopes were high but, unfortunately, they were forced out by an overflowing oil sump. Later, Winfield had more success driving his own No. 1 model "T", which was unusual in being a flathead able to compete on better-than-even terms with the overheads then popular on the fastest Fords.

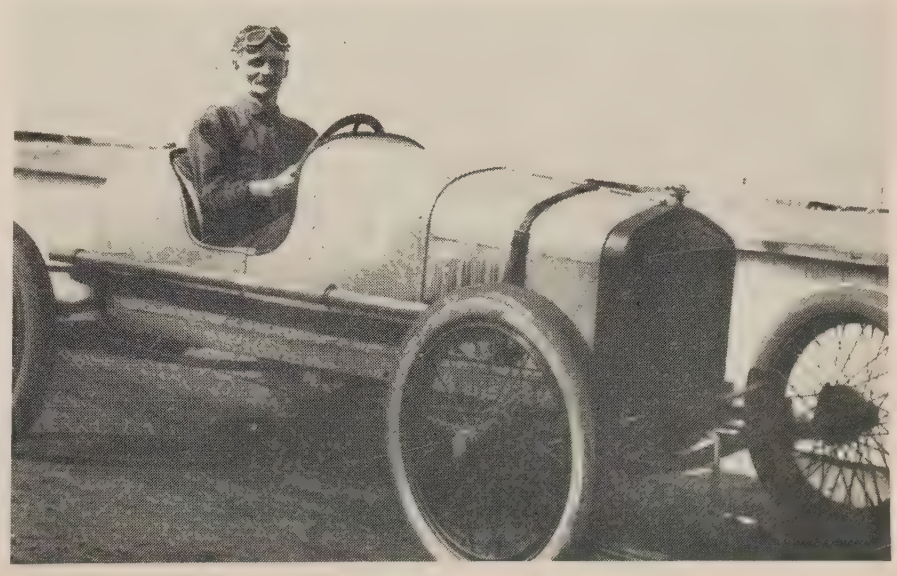
While deploring the jalopy derbies of today, it is well to remember the fine racing of the past, both road racing and on the speedway, and hope that we shall soon see such activity again.

At one time, Ascot included a popular "road racing circuit" which wound over the nearby hills. In the early thirty's, stock roadsters participated in several "Targa Floria" road races.

The last race at Ascot Speedway was run on January 26th, 1936.

Model Ts in action. While some of these were almost stock, others had elaborate racing engines. 1st Place Prize? A brand new model "T".

"Pop" Evans, builder and manager of many famous early day tracks, driving a modified type car with model T engine.



Windsor Castle is the background for a Hooper bodied Bentley owned by the Maharaja of Mysore.

# *Bentley*

The present day Bentley is a blend of the traditions for which the original Bentley Company stood, and those of Rolls Royce who now control the manufacture of the car. While the original Bentleys were sports cars of a most strongly defined character, the present car, owing to the refining influence of Rolls Royce, has become one with a much wider appeal. One of the most pleasant features of this car is that new owners, even those grown blase and disinterested in motoring as such, will find new pleasure in handling the magnificently balanced controls. The speed of which the car is capable (around 100 mph) can be used with complete confidence and freedom from mental strain. Although the factory produces a standard body, most purchasers prefer to have bodywork constructed by one of the specialist coach builders, such as Hooper or Park Ward.

Convertible coachwork by Park Ward on the Bentley chassis features a striking two-tone color scheme.

This Austin O.H.C. Racing Seven, between 1936 and 1939, achieved such outstanding successes in races in England and on the Continent, that it became known as the finest 750 cc race car in the world. Despite the diminutive size of its engine, this "mighty-mite" could talk loudly as evidenced by the spectator's attitude.

The 1939 Mercedes Grand Prix car, driven by Chet Miller in the 1948 Indianapolis 500-mile Race, rates high on the list of noisy cars. Its deep-throated roar all but drowned out the other cars at the start of the race. The pit crew seem to find the deafening sound a bit unpleasant.

—MARION G. PARKER PHOTO

# *Noise*

Race cars are all particularly noisy bits of mechanism but, for some reason, certain cars stand out as being far more so than others.

One of the greatest thrills of the midget tracks in the '30s was the penetrating bellow of the "outboards". They are now becoming extinct, to the regret of many enthusiasts, who loved the noise they make and the pungent smell of the castor oil they burned. Being a two-cycle engine, it turned over at ultra-high RPM; this, combined with the amplification of an eight-inch diameter tail pipe, set up a resounding hollow-chested scream that could be heard for miles.

Never has the world heard a noise to equal the Mercedes Grand Prix cars. We quote from George Monkhouse's book "*Motor Racing with Mercedes-Benz*" with reference to the Donington (England) Grand Prix:

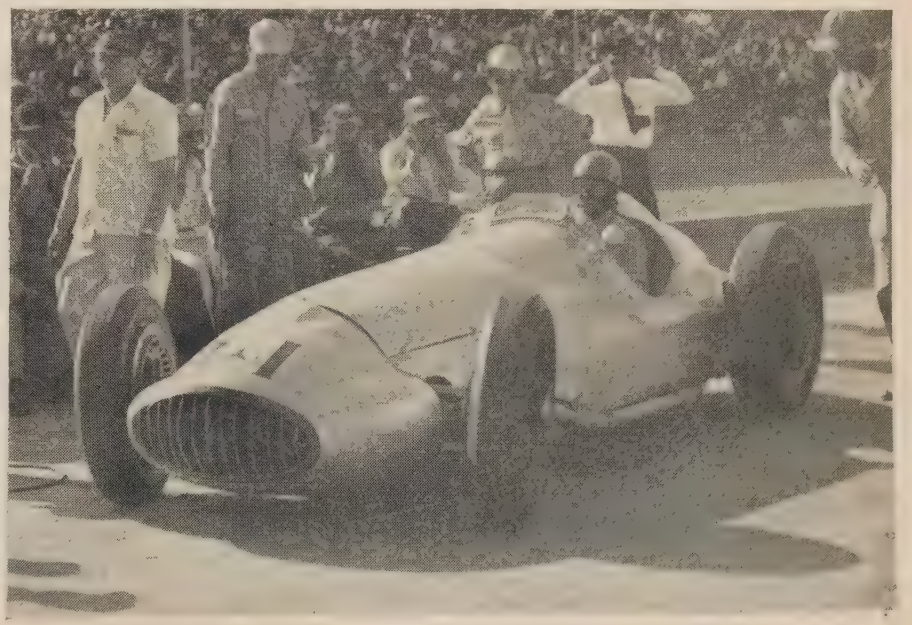
"After the "five-minute" signal the crowd obviously began to expect something to happen as one by one the English contingent started up with the usual "woof-woof" (exhaust bark).

"It was not until four and a half minutes later when, at the "thirty second" signal, four Mercedes roared into life, making an absolutely shattering noise which completely drowned everything else, including the Auto-Unions, that the spectators really woke up! . . ."

"At the 'five-second' signal there was a distinct rise in the note of this concerted barrage, Mercs, revving at four-five and Auto-Unions at three-two. Neubauer signalled 4,3,2,1, on his fingers to the Mercedes drivers and as Ebby dropped his Union-Jack, Lang's Mercedes shot forward into the lead at Redgate Corner . . ."

"Nothing I can say will give any idea of the reaction of this amazing start on the majority of the spectators, who having never heard, smelt, or seen anything like this before in their lives were knocked absolutely flat by the deafening noise . . ."

"Hardly had they recovered from this shattering start when Lang shot the crest of Starkey in a cloud of white dust at 170 miles per hour . . ."



## SHEET ALUMINUM BODY ON CAST ALUMINUM CHASSIS RESULTS IN LARGE-SIZE LOW-WEIGHT ECONOMY CAR

*An extract from*
*Revue de L'Aluminium*

Technical information on the revolutionary Hotchkiss-Gregoire is now available. The details are quite amazing, and a tribute to the genius of J. A. Gregoire, the designer.

The body, fabricated from aluminum, is a four-door sedan seating five persons, three in front, two in the rear. Wheelbase is 96½ inches. Performance is excellent, the maximum speed being about 90 mph. Fuel consumption at a steady 50 mph is about 30 miles per gallon. The car is front-wheel drive, the engine being located forward of the front wheels to give added traction.

The frame is the most remarkable feature of the car, being cast in light alloy entirely, except for tubular steel cross members. This results in remarkable rigidity and few, if any, of the rattles associated with conventional construction. The complete frame weighs only 210 pounds, and consists of the cowl, two front longerons, two rear longerons, and one front support.

Further details follow:

Steering: Rack and Pinion

Front Suspension: Independent, parallel arms, horizontal coil springs in tension

Rear Suspension: Independent, trailing arms, horizontal coil springs in tension. Torsion bar stabilizer.

Brakes: Lockheed hydraulic

Brake Drums: Gregoire design, as used on Renault and Panhard

Wheels: Cast aluminum

Tires: 5:50 x 16

Shock Absorbers: Houdaille

Gas Tank: 15.8 U. S. Gallons

Instruments: Jaeger

### ENGINE SPECIFICATIONS

Type: Water cooled, horizontal opposed, six-cylinder, overhead valves.

Block: Cast aluminum, with removable wet liners

Push Rods: Dural

Heads: Cast aluminum, with bronze-aluminum alloy valve seats, special cast iron valve guides

Carburetor: 32 mm Solex

Electrical System: Ducellier 12V

Bore: 86 mm

Stroke: 86 mm

Displacement: 1,998 cc

Compression Ratio: 6.5 to 1

Horsepower: 60 @ 4000 RPM

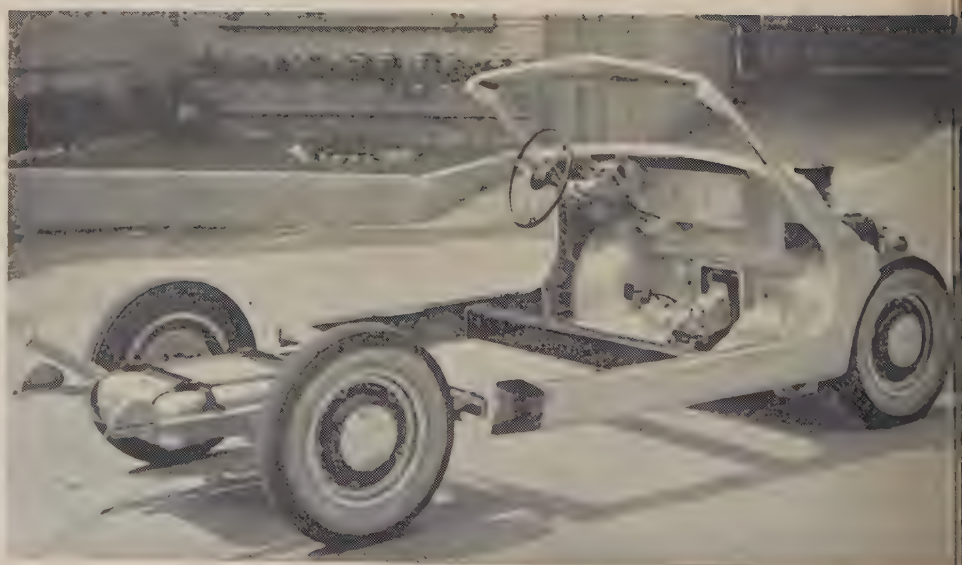
Max. Torque: 13.7 Meters/KG @ 2000 RPM

Oil Capacity: 6.3 quarts

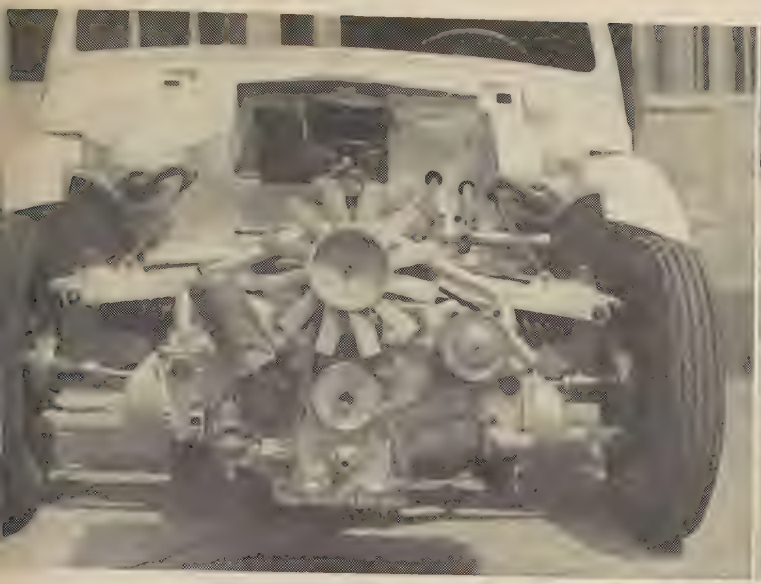
Transmission: 4 speed

Gear Ratios: 1 and reverse—.335
2nd— .668
3rd—1.00
4th—1.31

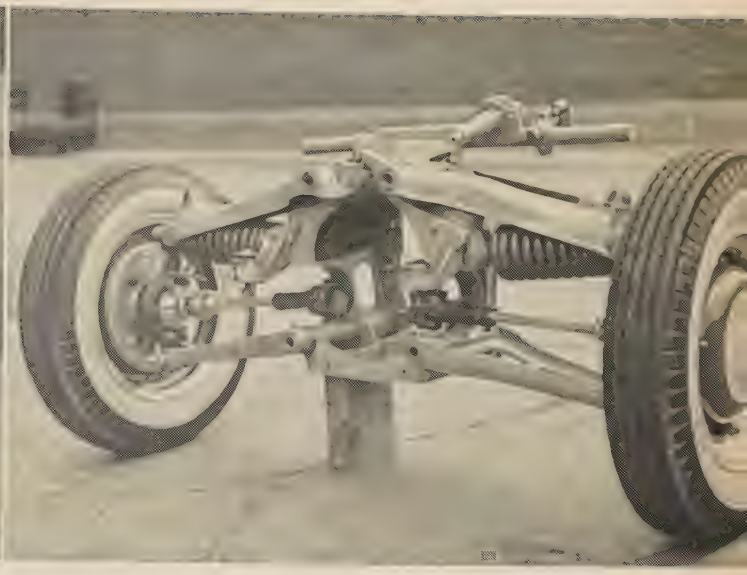
Differential: 9:29



# he Hotchkiss Gregoire



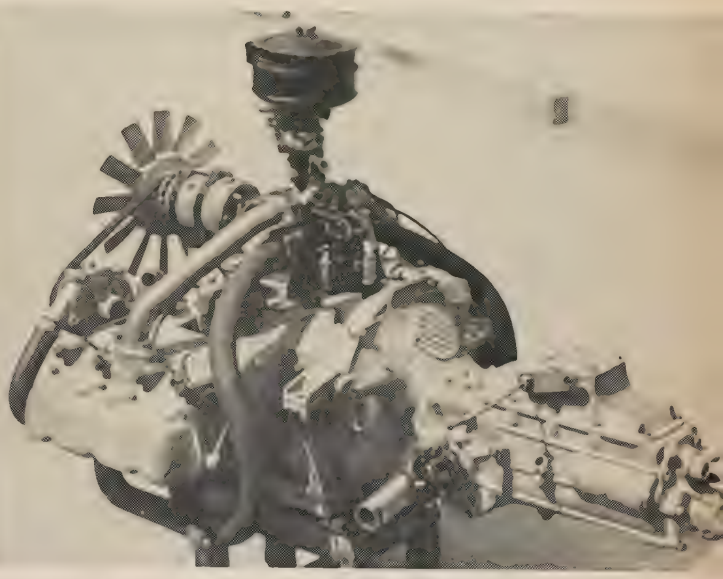
1. Front wheel drive, forward engine



2. Front running gear assembly

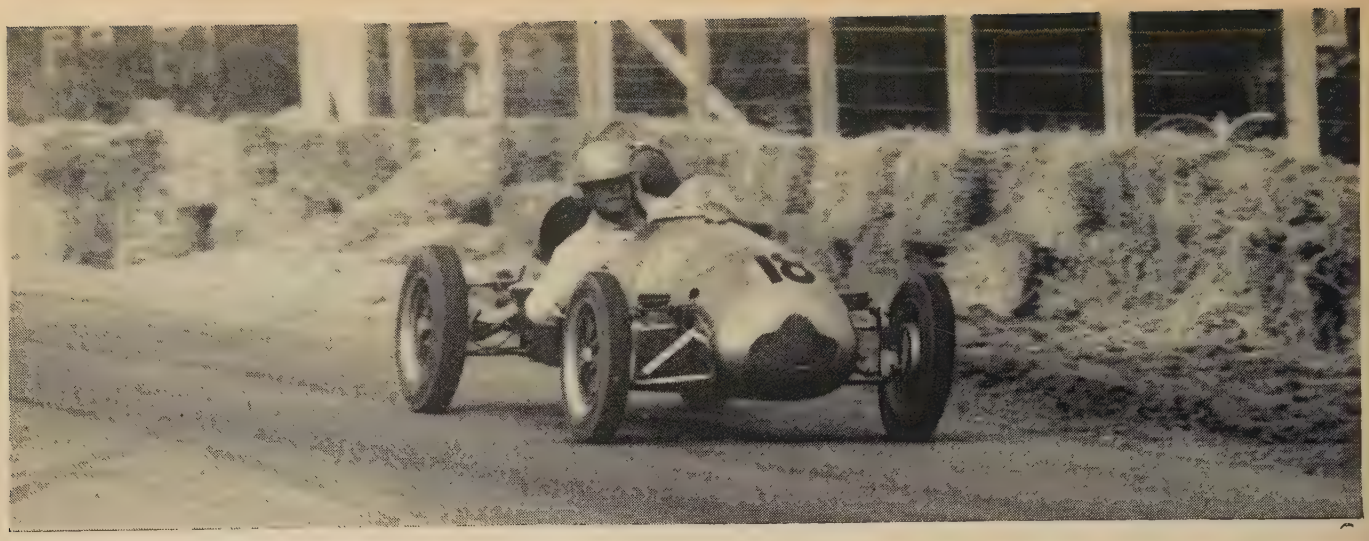
3. One-piece cast-aluminum cowl

4. Flat-opposed 6-cyl. 60 HP engine



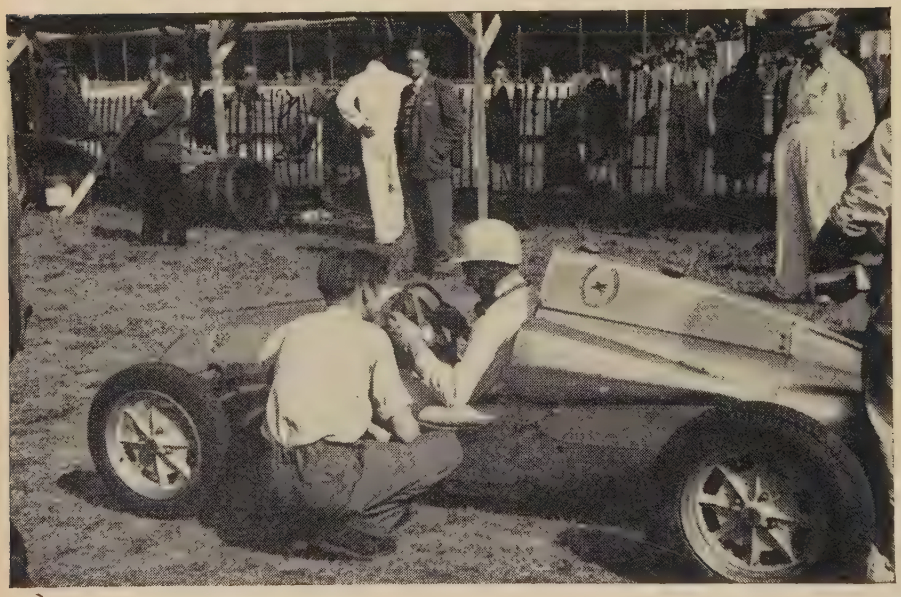
5. Trailing arms for rear wheels

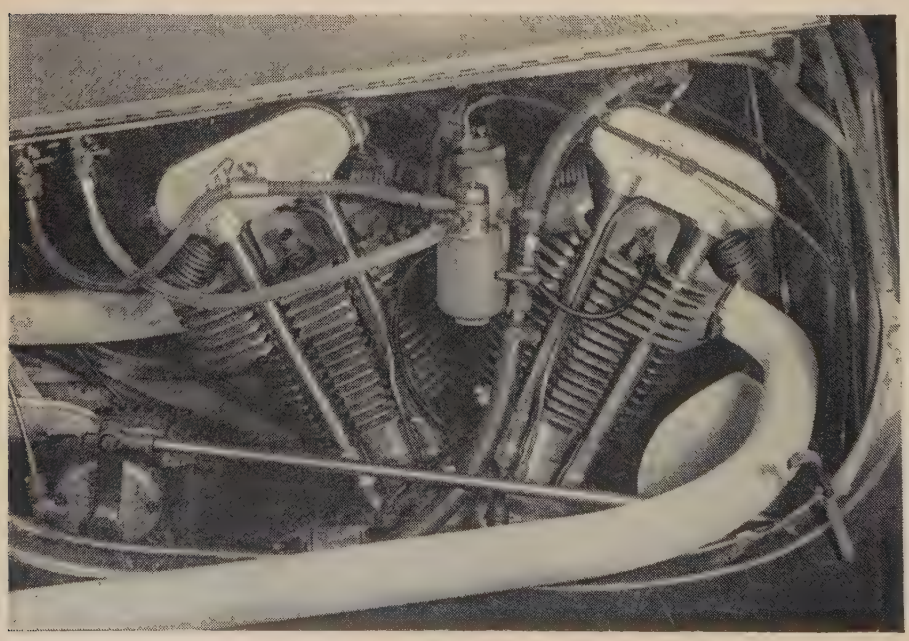
6. Torsion bar stabilizes rear wheels



John Cooper, in one of his 1000 cc cars, takes a fast curve on the Blanford Road Race course. —KLEMANTASKI PHOTO

# THE BIG COOPERS





Race cars, like other automotive designs, have a tendency to "grow-up". Altho the Cooper was developed for 500 cc racing, it was not long before 1000 cc JAP engines were being installed and Coopers were offering strong competition in the larger classes.

Sterling Moss, the 19-year old driver who has scored many successes in Coopers, was one of the first to enter his "500" in the 750 cc to 1100 cc events. Rather than change engines when converting from one size to another, Moss ran his vee-twin 1000 cc JAP with one cylinder "dead" to reduce displacement to 500 cc. Despite the extra weight, he won many victories over the conventional Cooper 500's.

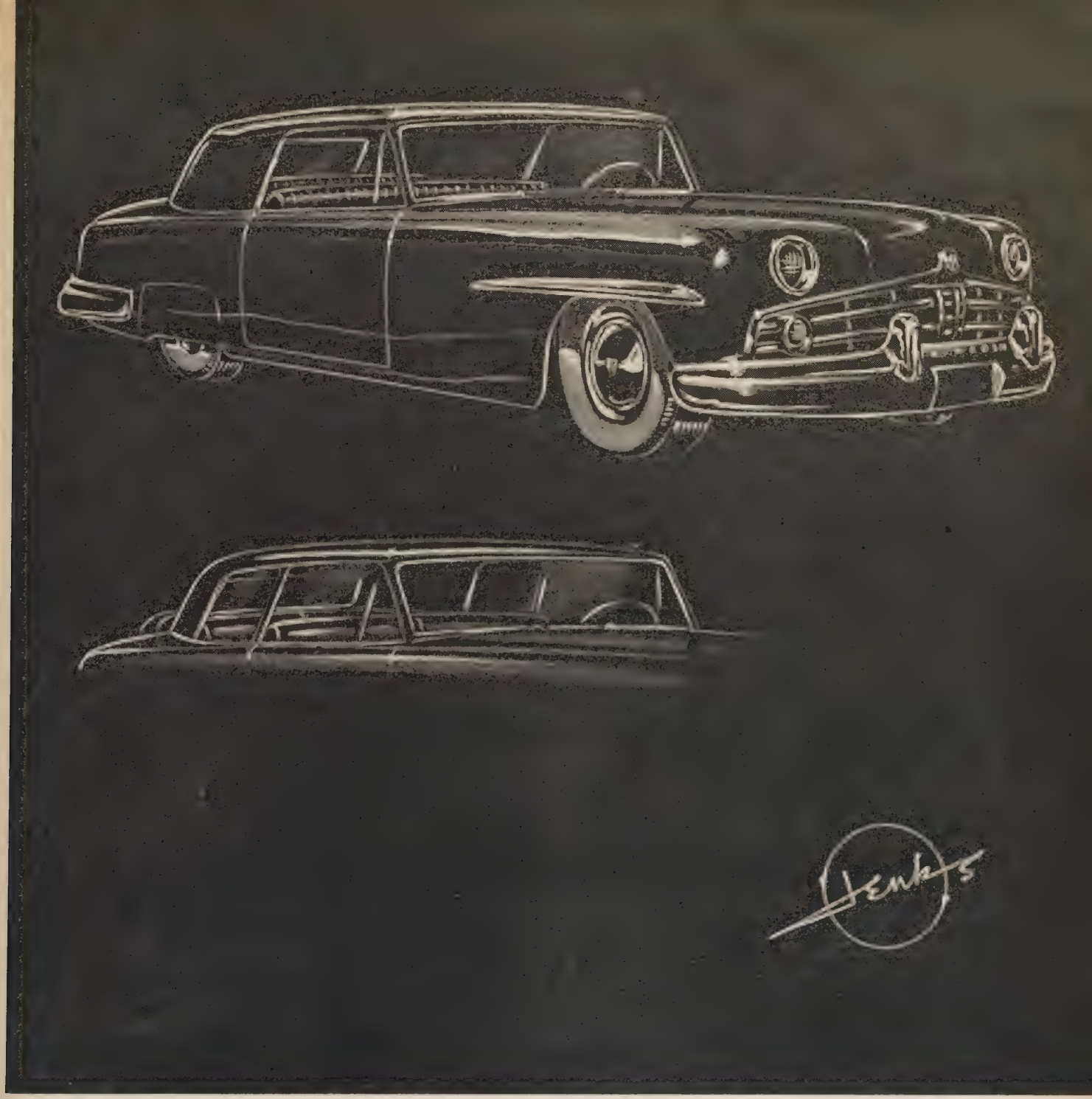
By running a 1000 cc car in a 1100 cc race, the maximum performance was not available. The firm of J. A. Prestwick, Ltd., manufacturers of the world famous JAP motor cycle engines, were finally persuaded to build a special 1100 cc model for the Cooper. Whereas the 500 and 1000 cc units were developed for motorcycle racing, the new engine was designed for race car use. An output of 94 BHP is obtained at 6000 RPM.

The British are prone to take the direct approach in testing new equipment and the Cooper-JAP "big" combination was no exception. Using the short circuit at Silverstone (English airport used for racing). Of 2.278 miles length and having two hairpin turns, this circuit offered excellent opportunity to try both flat-out speed and acceleration. Nine of Britain's leading drivers drove a total of over two hundred miles in the new Cooper. They were to "blow up" the engine, if possible. Speed of over 120 mph was reached and the best lap was at 82.84 mph, but the engine was ready for more.

One of the drivers, Betty Haig, intends to run one of the new cars in all sprint events this year. Several others have announced their intention to do battle with the 1100 cc model this season. The one litre Cooper tamed many of the larger cars last year so the Big Cooper will be a competitor to watch.

Brilliant young driver, Sterling Moss, sits in his 1000 cc JAP-powered Cooper at the 1949 Goodwood Race. —KLEMANTASKI PHOTO

The new 1100 JAP engine develops 94 @ 6000 RPM. It was designed for the Cooper.




# SKETCH PAD

**by Bill Jenks**

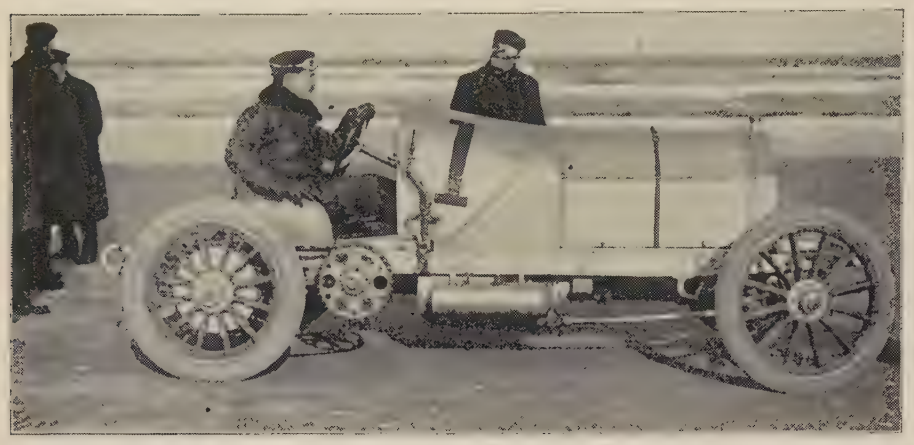
Drawings by Bill Jenks, which frequently appear in *Road and Track's* "Design Forum," have been so popular that a new department has been created. "Sketch Pad" by Bill Jenks will delight the redesign and customizing enthusiasts. Various makes and models of both American and foreign cars will be given the "Jenks treatment." Do you have a favorite to suggest for "Sketch Pad"?

Even the most loyal foreign car enthusiast will give praise to the design of the Lincoln "Continental." Long, low, and black, this elegant car was a masterpiece of clean design from the tip of its squat hood to the dignified mounting of the spare wheel .Somehow, the Continental "looks right."

Strong rumors of a new Continental by Lincoln have inspired speculation as to its probable styling. Staff artist Bill Jenks has made a few sketches to illustrate his version. Mounted on a modified Lincoln Cosmopolitan chassis, there would be two models available—a three-window coupe for those wishing privacy and a five-window coupe for visibility fans. By lowering the hood 4½ inches, the fender height becomes the waist line. The spare wheel is mounted vertically at the rear in the true "Continental" manner.

# ANTIQUE AND VETERAN

by W. E. Miller



Above, the famous W. K. Vanderbilt, Jr., in his 90 HP Mercedes at the 1905 Ormond Beach Races.

Below, Louis S. Ross setting the mile record of 38 seconds in his streamlined steam car at Ormond Beach, Florida (1905).

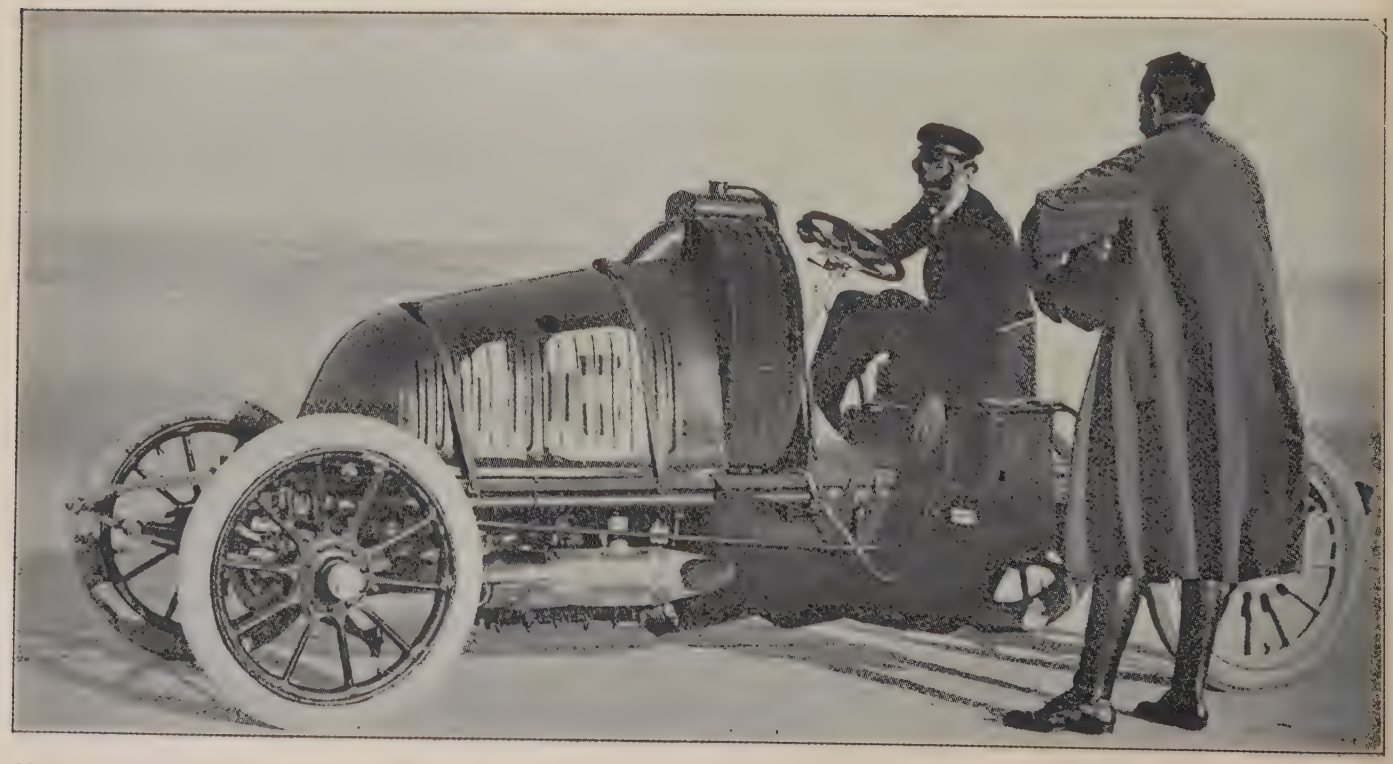
M. G. Bernin in W. Gould Brokaw's 60 HP Renault at Ormond Beach, Florida. Note circular radiator and tubular frame.

Speed on the road has been the fetish of many since the days of Jehu. It is recorded, at the time of his ascendency to the throne of Israel 884 B.C., that the watchman on the city wall recognized him afar off; "For he driveth furiously".

We shall never know who built his fast vehicles nor the cubic displacement of his horse's lungs. But, since the advent of the automobile, the builders of race cars have shared honors with the mount and its driver.

Herr Gottlieb Daimler built the engine which, in a French car, won the first international race from Paris to Rouen. The first race car by Carl Benz achieved success in the Paris-Marseilles race the following year. In that same year, 1895, J. Frank Duryea's car won the first American race and was also first to arrive (adhering to the rules) in England's famous run to Brighton altho it was not a race.

Since those "First" days many men have built scores of glorious cars. Names such as Finley Robertson Porter who designed the Mercer cars, Harry C. Stutz who built the Marion, Stutz and H.C.S., Henry Ford and Alexander Winton, who raced against each other when the latter was beaten by that young "upstart". It was an unhappy day for the proud Winton and others of the Selden patent crowd.



Andrew L. Riker, who was making a picturesque electric car, joined forces with the builders of the Locomobile steamer (a design of the Stanley twins), and immediately set about to produce the great Locomobile gas cars that won many races in their early days.

Perhaps some of the younger readers who admire the world famous Mercedes-Benz cars do not associate this make with the name of Gottlieb Daimler aforementioned. Daimler made his first gas powered vehicle in 1885 and organized the Daimler Motoren Gesellschaft in 1890. He licensed the English company to build Daimler cars after his patents and this company still supplies cars for England's Royal Family. He also sold engines to the French firm of Panhard and Levassor. A man of Vienna, an Austro-Hungarian consul at Nice, was financially interested in the Panhard. The racing performance of this car with Daimler's engine in 1894 stirred his imagination. After the death of Daimler in 1900 he discussed with Wilhelm Maybach the desirability of a lighter car and, in 1901, an entirely new car, which became the pattern for most of the world's automobiles for more than a decade, was delivered to him at Nice.

This man, Emile Jellinek, became so enthused that he obtained the sales rights for this car in France. Its German name, however, was an obstacle across the border and with the approval of the company the car was named "Mercedes" after Jellinek's daughter. It was not until 1926, three years before the death of Carl Benz that these two great firms were combined to produce the Mercedes-Benz cars.

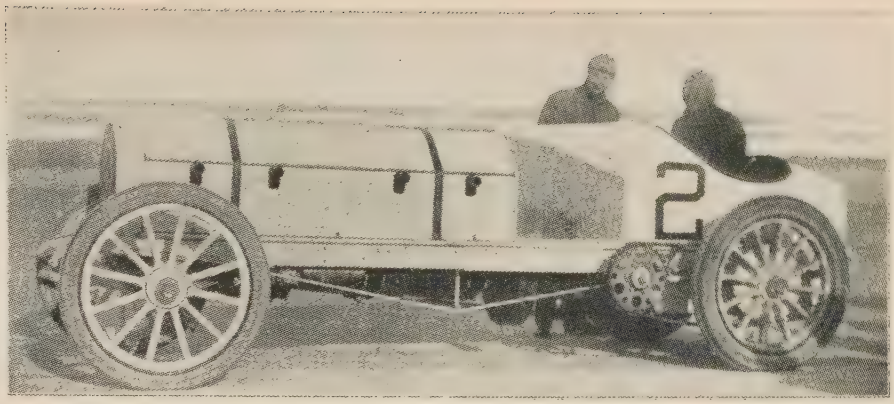
Two Swiss engineers have gained fame for their fast cars. Dr. Ferdinand Porsche has a long and brilliant record backed by the achievements of the racing Auto-Union, the Steyr, the frameless Austro-Daimler with the tubular back bone and others. The Austro-Damiler was also originally built under Daimler license in Vienna and was first called Maja which was the name of the sister of Mercedes Jellinek.

The Hispano-Suiza was the work of a Swiss named Marc Birkgt. He first built his cars in Barcelona, Spain with the support of King Alphonse—which accounts for the name. The Paris company, however, became the more famous. These cars were also built by the Skoda works in Prague.

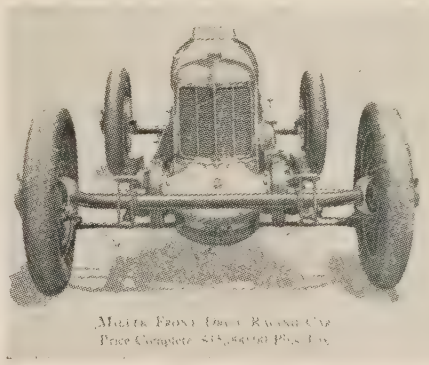
Who knows what even greater success the Renault brothers might have had if it were not for the death of Marcel Renault in the gruesome Paris-Madrid race which was halted by the authorities after many were killed.

Vincenzo Lancia gained his experience as a driver on the F. I. A. T. racing team (*F*abrica *I*taliano *A*utomobili *T*orino). The first cars built under the Lancia banner were very similar to the Fiat and were copied in this country by SGV (Sternberg-Graham & Vincent) at Reading, where the Acme car was formerly built. About 1914, the SGV added the Cutler-Hammer Vulcan electric gear shift with a series of push buttons on the steering wheel spider. On both cars the hand throttle was in the form of a hand wheel co-axial with the horizontal spider next to the steering rim. In later years, the Lancia cars displayed the originality of a great designer.

The fascinating story of Ettore Bugatti has already been told in a recent issue of *True Magazine*. Much could be written about Montague Napier, Louis Coatalen and his Sunbeam racing victories, J. G. P. Thomas and his Leyland that cruelly decapitated him with its driving chain at Pendine Sands.



Like big engines and long hoods? This straight-8 Mercedes was among the early competitors in races on the Florida beaches at the turn of the century.



The illustration above, the famous 91 cu. in. Miller front drive race car, is taken directly from the Miller catalog. Note the price, $15,000.

Returning to our own country, it is strange how many persons think that the Duesenberg is a German car. But, it is one of our very own. Fred Duesenberg, after working for a time with the Thomas B. Jeffrey Co., designed, in 1905, the Mason cars in Iowa using a whopper two-cylinder engine. In 1912, he entered his Mason cars in races. The car soon after became the Maytag-Mason, a venture that continued but a short time, after which automobile production was dropped and the Maytag washing machines poured from the relocated factory.

The first Duesenberg Motor Company was organized in St. Paul in 1915 and moved to New Jersey in 1917. Engines for Roamer, Noma, Biddle, Revere and other passenger cars were produced by Rochester Motors in Rochester, N. Y. These were of the famed four-cylinder horizontal-valve side-rocker type. The original straight-eight engine used this arrangement but it was soon discarded for the overhead cam design.

Duesenberg's successes on the American tracks were perhaps equalled only by Harry Miller, and his was the only car ever to win the French Grand Prix. In 1921, Jimmy Murphy drove the Duesenberg straight-eight across the finish line on a flat tire and with a dry damaged radiator. Much credit it due to Fred Duesenberg's brother, August, who was his life-long associate in the building of cars, and survives Fred who died in 1932 from injuries received in an automobile accident.

Truth forces me to deny kinship to the late Harry A. Miller (that question is often asked of me). However, I count myself fortunate in having worked for him for a brief period. His first racing work was on carburetors, with which he was very successful. This led to his being lured East to establish the Master carburetor using the multiple jets he had patented. He could hardly make himself stay for the six months period of his contract, returning immediately thereafter to Los Angeles to resume his racing work.

The first complete Miller racing car was Barney Oldfield's Golden Submarine. Other machines were built and a bigger plant was necessary. Homer Laughlin, an Ohio producer of fine china, had entered the automobile business in Los Angeles about 1917 and his engineers dreamed up a V-8 front wheel drive car in a plant at 2652 Long Beach Blvd. It was in this plant that Harry A. Miller built the straight-eight front wheel drive race cars some seven years later.

Miller himself never seemed to have any of the tension associated with speed. Always relaxed and apparently with all of the time in the world he methodically considered the problems of racing. If any one "butched" a part Miller displayed no ruffled emotions, but simply said, "Make another one".

Many celebrated drivers came in to discuss the new cars being constructed for them. Cliff Durant, son of the founder of General Motors, Tommy Milton, Jerry Wonderlich, Harlan Fengler and others. Dave Lewis and Frank Lockhart worked in the plant building with their own hands the cars that they drove. It was interesting to evesdrop on these men as they held conference with Miller and Leo Goossen, his chief engineer. In his measured speech, Miller would confess that there was much he did not know about the problem at issue, proceeding to tell in detail the things he did not understand. It was unfortunate that wire recording was not a reality then, to capture these discussions, for his "ignorance" constituted an excellent technical treatise on the subject.

Miller lived about 60 miles from the shop at Malibu Lake in the mountains and was very fond of animals. He maintained a fair sized zoo which he loved to show his visitors. At the shop his bullpup "Rex" followed him constantly. In the engineering room on the second floor a parrot entertained all who worked or entered there.

The Miller shops were in a new location at 6233 S. Gramercy when the depression and and the folding of the board tracks bankrupted him. In the eight years prior to his death, he was employed by the Gulf Oil Company in an experimental capacity with headquarters in Detroit.

Engineer Leo Goossen still carries on with the Miller tradition, being responsible for the design of the Offenhauser and Meyer & Drake race car engines. No doubt Polly is still helping him with the job for he inherited the hilarious old bird.

SPORTS CAR CLUB OF AMERICA
Major SCCA Events
1950
JUNE 10: Bridgehampton, L.I. Road Races
SEPT. 23: Watkins Glen, N.Y.
INTERNATIONAL SPORTS CAR Grand Prix Race
This WATKINS GLEN GRAND PRIX RACE is on the F.I.A. International Calendar Sept. 23

Anticipating the flashbulb is Briggs Cunningham, left, winner of the Heart Trophy Race. The genial chap on the right is Lord Selsdon, co-winner (with Luigi Chinetti) of the 1949 Spa 24-Hours Race. Lord Selsdon has formally entered his Ferrari in the 1950 Watkins Glen Grand Prix. Another early entrant from England in the September 23rd S.C.C.A. event is Leslie Johnson, famous British driver who ran in the "Round-the-Houses" Race at Palm Beach.

## BRIDGEHAMPTON ROAD RACE TO BE RUN JUNE 10

On June 10th will be run one of America's greatest road races. After the success of the 1949 race, there can be no doubt but that the Bridgehampton Sports Car Road Races this year will attract even more entries and more famous drivers than ever before. Among new cars entered are the Farina-redesigned Crosley owned by Alec Ullman and driven by Haig Ksayian, and a Frazer-Nash owned and driven by Lawrence Kulock. Other entries include Nardi-Alfas, Allards, Healeys, H.R.G.s, Jaguars, Briggs Cunningham with his Ferrari, and, of course, the usual swarm of M.G.s. There is a possibility of a special 500 cc event.

The race is again under the sponsorship of the Lions Club of Bridgehampton, and staged by the joint efforts of the M.G. Car Club, the Sports Car Club of America, and the Motor Sports Club of America. Mr. J. Bruce Stevenson, M.G.C.C., is again the General Chairman.

The course, which is driven in clockwise direction, is roughly rectangular, but tricky because of no-passing areas, and is approximately four miles in length.

### ANTIQUE AUTOMOBILE CLUB OF AMERICA

| | |
|---|---|
| June 3-4 | Atlantic City Run<br>Hdqrtrs—The Claridge Hotel<br>Atlantic City, New Jersey |
| August | Steam Car Meet |
| Oct. 14 | Fall Meet<br>Devon Horse Show Grounds<br>Devon, Pennsylvania |

Attention Club Secretaries: This is YOUR page, so please keep us advised of your activities. Address: Club News, Box 409, North Hollywood, California.

## SANTA ANA ROAD RACE

The Sports Car Racing Association, organizers of the Palm Springs Road Race, have announced the first West Coast AAA-sanctioned sports car road races to be held at the Santa Ana, California, Naval Lighter-Than-Air Station on June 25, 1950. There will be seven events, varying from twenty to forty miles in length, over the all-paved two-mile course, including races for novice M.G. drivers, 500 cc cars, production stock cars (foreign or American), production sports cars under and over 1500 cc, and an unlimited class of two divisions.

All cars must be driven by amateurs. The term "amateur," for purposes of the event, shall be understood to be any person who shall not have received any monetary reward, consideration, cash prizes or other form of material gain by driving in an automobile race in the U.S. during 1950.

The course will interest spectators and drivers alike as it is laid out to include a paved disk 1/3 mile in diameter and has numerous hay-bale chicanes in the European manner, with the longest straight slightly under one-half mile.

Entries close June 10th and application may be made to the Sports Car Racing Association, 220 North Canon Drive, Beverly Hills, California. Entry fees will be $3.00. Trophies will be awarded. Post entries will be accepted at the discretion of the Rules Committee. The fee for such entries will be $7.00.

We have received many inquiries from readers who wish to join sports car clubs. In order to facilitate contact, we plan next month to publish a listing of all clubs. If you wish to be included in this directory, please write immediately giving club name (and affiliation, if any), current mailing address, and membership restrictions.

## EQUINOX MOUNTAIN HILL CLIMB

After a year of preparation, the New England Region of the S.C.C.A. has announced completion of plans for a hill climb to be held at Equinox Mountain near Manchester, Vermont. The course is a private toll road, owned by Mr. J. G. Davidson, approximately six miles long with a rise of 3200 feet, and may ultimately become a "Pike's Peak" of the East.

Activities will start at noon Saturday, May 20, with the timed runs to be started at dawn Sunday. Cars will be started at two minute intervals with the timing to be done with the aid of radio communication. All cars will go up once before any come down, with the run repeated three times.

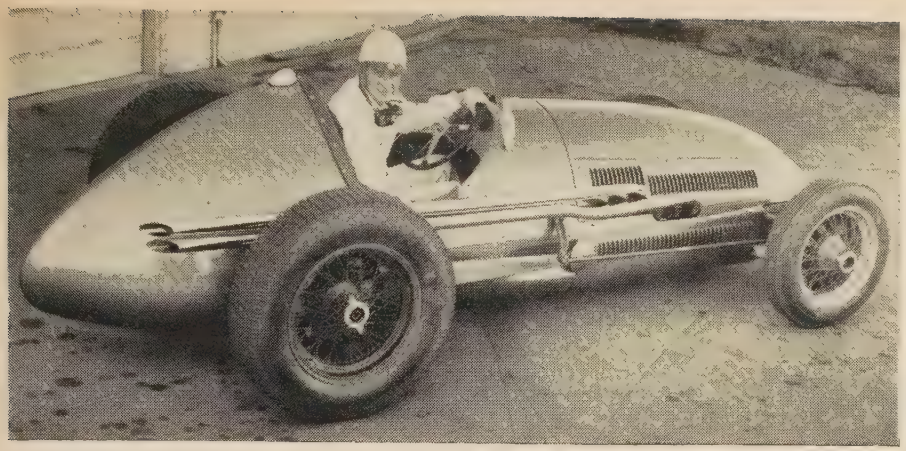
There will be two categories, Sports and Unrestricted, with each broken down into classes by piston displacement. Supercharged cars will move to the next higher displacement class. There will also be a vintage class, if enough entries warrant.

Other clubs may well follow the example of the New England Region S.C.C.A. and search their areas for suitable private roads.

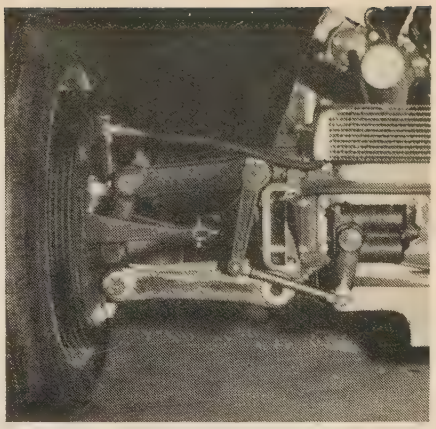
## LONG BEACH M.G. SPORTS CAR CLUB

The Long Beach M.G. Sports Car Club, which now has grown to twenty-eight members, recently announced the results of their second Reliability Run which was held on April 30th. The run started in Long Beach and went around Lake Matthews, thru Riverside, Ontario, Pomona, and back thru Brea Canyon to terminate at Knott's Berry Farm after 125.6 miles. The winner, Jack De Friest, made the five check points with a total error of only 50 seconds. Second place went to Dr. Paul Winters and third to Sam Caldwell.

The club's first run, to Lake Elsinor, was won by Dot Dickinson, who is shown above with her winner's trophy.



Alan Heath, popular midget driver, at wheel of completed Diedt and Schroeder speedway car.



Unique linkage is used on oversized two-way shock absorber which acts on same suspension arm as does torsion bar.

# Story of a Speedway Car

PART 4

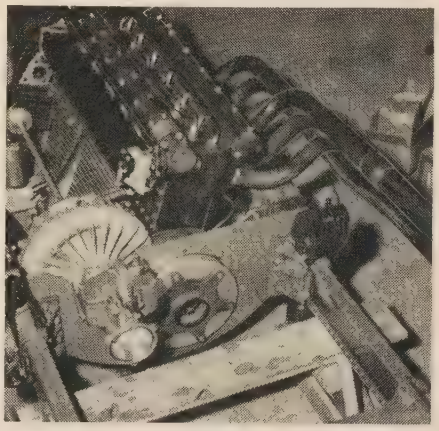
PHOTOS BY R. G. HORSCHKE

Louie Meyer, three time winner of the "500" and builder of America's only production race car engine, gazed about the shop, littered with bits and pieces of a completely disassembled race car. Bare frame rails lay on the floor and a milling machine was busy on yet incompleted parts. Date—April 25. "She will never be ready in time for the race," said Louie as he shook his head.

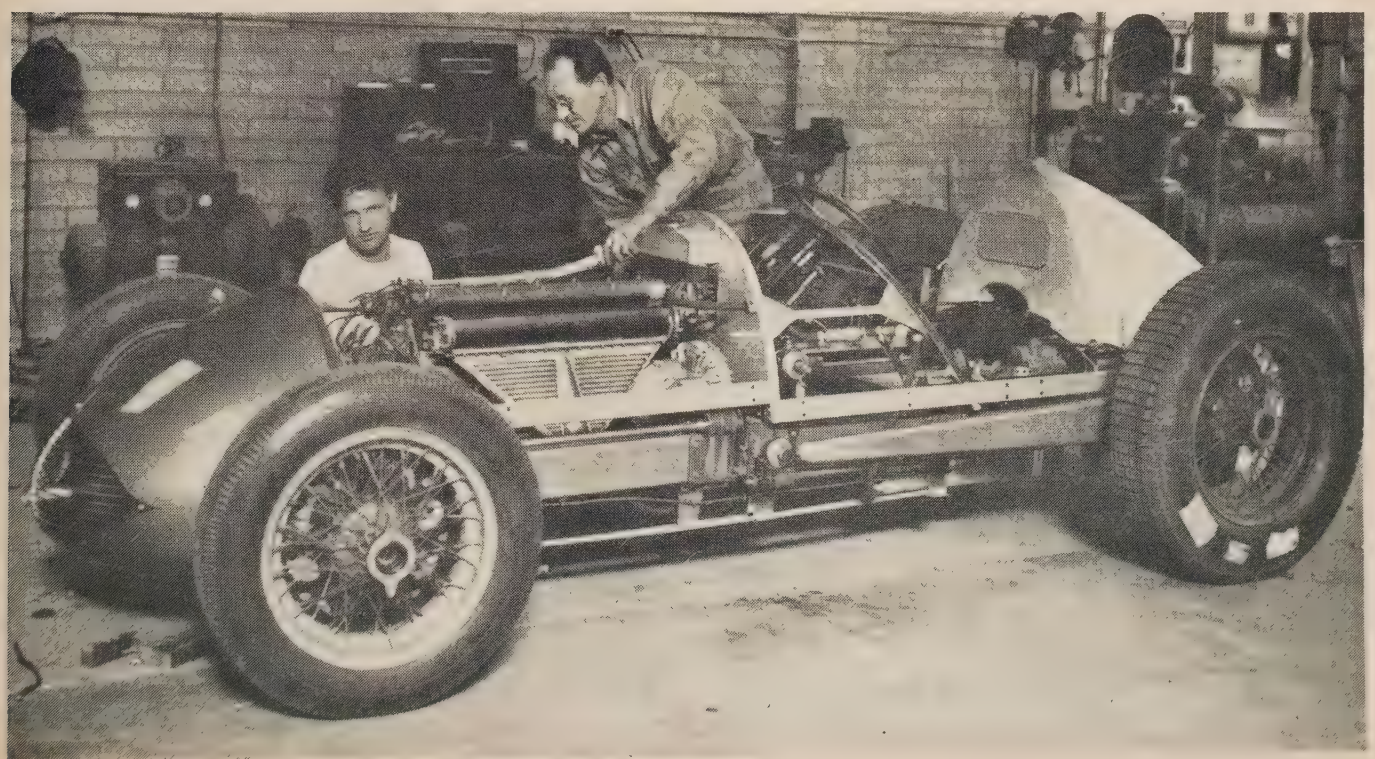
Seven days later, a tired but happy crew loaded the Brady Special, first of the Diedt and Schroeder speedway cars, on its special Indianapolis-bound truck. From a signed order to completed car is less than three months—truly an accomplishment when one considers the innovations and originality of the design.

Like many other new race cars, the D-S must now face the big test—500 rough miles consisting of 2,000 turns and 2,000 straights—a pounding that shakes cars apart and saps the driver's strength. Will the Diedt-Schroeder car make a name for itself — perhaps Part 5 of this series will be a resumé of the victory!

Shaft-driven supercharger has carburetor located inside cockpit. Blower intercooler and equal-length exhaust manifold are visible.



Tired and weary from long hours and concentrated effort, Gordon Schroeder and Emil Diedt make final installations.



# Indianapolis Trophies

## ...lest we forget

In the earliest days of automobile racing, the objectives were far different from those of today. Drivers were just any Joe with a set of wheels and an urge to show that he and his car were a faster combination than that of his neighbor. The prizes were perhaps no more than the admiration of small boys and the satisfaction gained by winning. Th old timers drove furiously, and often fatally, with little thought of whether or not not their bank balance would show an increase when the race was over.

Many of the early manufacturers ran teams of their own—it was good publicity and the winning manufacturers' sales zoomed. Duesenberg with their successes at Indianapolis is but one example.

It wasn't long until trophies and cash prizes were offered to encourage the construction of better cars and the consequent attainment of higher speeds. The 1950 driver at Indianapolis is competing primarily for a share of the ever-increasing purse, while the trophies have been relegated to the status of advertising gimmicks . . . mere "props" for publicity pictures.

While realizing that the cash prizes are now an absolute necessity, *Road and Track* feels that the trophies should not be forgotten.

### THE EDWARD STOMPOR TROPHY

The widow of Edward Stompor, a mechanic who was killed in the Pacific during World War II, has created this trophy in his memory. It will become the permanent property of the mechanic whose car wins the most times over a period of ten years. It was first offered in 1946, to be won by Eddie Offut on the Thorne Engineering Special, and the three following years by Lou Moore on the Blue Crown Cars.

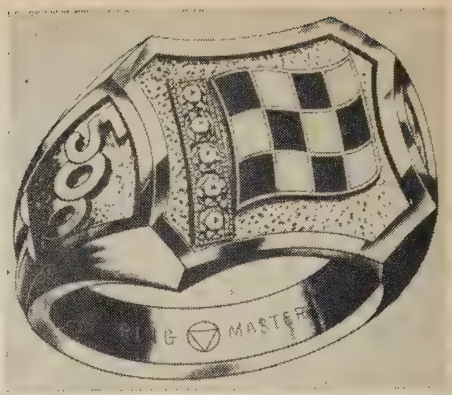
### ROBERT M. BOWES MEMORIAL TROPHY

The Bowes Trophy, given in memory of the late president of the Bowes Corporation, was donated and paid for by the employees of that organization, and is the only Indianapolis trophy in this category. First offered in 1946, it is presented annually to the driver who wins the pole position and remains in his possession until the next race. Standing forty inches high on a walnut base and topped by a gold race car, it is engraved with the name of the drivers and the speeds they attained. To date, it has been won by Cliff Bergere, Ted Horn, Rex Mays, and Duke Nalon. It will become the permanent property of the first driver to win it twice and will then be replaced by another Bowes award.

### BORG-WARNER TROPHY

Presented by the Borg-Warner Corporation to the winner of the "500," the "Men of Motors" trophy is perhaps the most widely known of all those at Indianapolis. This is the award which the traditional "pretty girl" hands to the driver in "Victory Lane."

The five-foot seven-inch silver cup is valued at $10,000 and is not actually "taken home," the winner receiving a two-foot miniature and a cash prize of $1,200. Since its first appearance in 1936, the trophy has been won by George Robson, Floyd Davis and Mauri Rose (co-winners), Floyd Roberts, Louis Meyer, Billl Holland, Mauri Rose twice, and Wilbur Shaw three times. After each race, a silver mask of the winner is placed on the trophy along with the faces of all the past winners. →

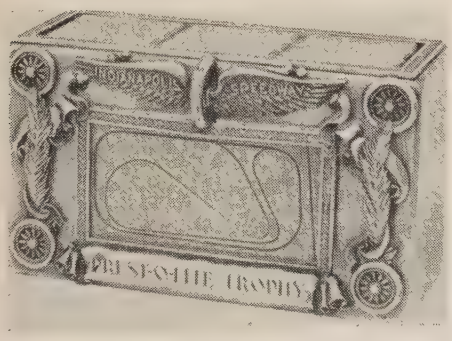


### BARDACH BROTHERS "RINGMASTER AWARD"

The Bardach Brothers "Ringmaster Award" is given each year to the winner at Indianapolis as acknowledgement of victory in a grueling test of skill and endurance. This award has been made each year since 1947 and is one of the most valuable to become the personal property of the winner. It is made of gold and platinum, and studded with five diamonds which form the staff for a miniature replica of the checkered flag, symbol of the victor.

WHEELER-SCHEBLER TROPHY

Oldest of all the trophies, the Indianapolis Motor Speedway Trophy presented by Wheeler and Schebler, was originated in 1909 to be awarded to the winner of the 300-mile race. Later, the distance was set at 400 miles and the permanent recipient to be the owner whose car lead at that distance three times. This beautiful trophy, standing eight feet tall, was designed and made by Tiffany & Company at a cost of $8,000, it became the permanent property of Harry Hartz by reason of his ownership of the cars driven by Billy Arnold in 1930 and 1931 and by Fred Fame in 1932. It is now owned by the Firestone Tire Company.



PREST-O-LITE TROPHY

Suggested by the bricks of the Speedway, the Prest-O-Lite "Silver Brick" stood as an award over a great span of years than any other trophy—from 1910 to 1940. At that time Wilbur Shaw took permanent possession by winning two consecutive races. In all, he had won it five times, but it took his 1939 and 1940 wins to take it home for good. This award was given to the driver leading at various distances and originally included a prize of $50.00 a week for twenty-six weeks. It is engraved with the layout of the Speedway as it was in 1910 (note road racing circuit) and with the names of the men who have won it.

L. STRAUSS TROPHY

The Strauss Trophy has been presented annually, since 1911, to the winner of the race by L. Strauss and Company of Indianapolis. Rather than the conventional trophy, the Strauss Company, prior to World War II, had agents scouring the art centers of Europe in search of appropriate statuettes or other works of art, symbolizing the international aspect of automobile racing. Because of diffi culty in finding such objects, the award in 1946 was to have been a trip around the world. Due to the sudden death of winner George Robson, however, a change was made and his wife was given $1,000. Since that time the award has been a portrait of the winner, painted by Ernest R. Roose.

JOHN W. HOBBS TROPHY

The John W. Hobbs Trophy, newest of the Indianapolis awards, was just completed in time for the 1950 event. Mr. Hobbs is well known in racing circles thruout the country for his $100 gifts to "hard luck" drivers. Due to the difficulty of choosing a single "hard luck" driver at Indianapolis, Wilbur Shaw suggested that the trophy be given to the leader at a specified distance, and the distance has since been set at 250 miles. Winners' names will be inscribed on the plates at the base.

## ROAD RACING

*(Continued from page 13)*

teur driver attempts to control a large engined car".

It seems to me that amateur drivers have not only attempted, but have to a degree succeeded, in controlling large engined cars very nicely, and without benefit of professionalism.

Assuming that attention has been paid to chassis design sufficient to insure that more than just "brave young American ingenuity" has gone into it, it is my personal opinion that for a driver of modest skill and steady temperament, the larger engined car is the safer and easier to drive.

To summate, the really controlling factor in road-racing safety is balanced between the driver's temperament and the chassis design, with engine capacity coming along for examination at a later date.

An immeasurable service can be done the sport NOW, by stressing these two more important features, rather than following the usual course of assuming that races are won by whooping up the engine and being brave.

Taking first the drivers temperament; this can only be controlled by issuance of competition licenses from responsible organizations such as the Sports Car Club of America. In this way, we have some opportunity to bring along new drivers in an atmosphere of freely exchanged "know-how" and maturity of judgment.

As to high performance chassis design, Americans have long neglected this phase. The manufacturer, concentrating on a passenger car, does not stretch himself to provide high-speed stability on bumps and corners, in the laudable belief that the average customer has no business trying to corner a Cadillac at 90 mph. The very few solvent racing car designers in this country are concerned only with dirt tracks or Indianapolis, where conditions are highly specialized.

Because our best engineers have not been paying any attention to the subject, Europe has pulled ahead of us in chassis design for sports and racing cars, and we are not in a position to surpass or even equal them for a few years.

The American-engined "hybrid" cannot be said to be "designed". Those which have been welded together in the back yard are even more suspect. To that extent some of the "large engined" cars I have seen should not be permitted to race, and here again, a responsible organization with suitable licensing and inspection facilities is the best protection. To bar this sort of iron because the engine is big is like shooting a broken-legged horse because he has a long tail. Such a course of ignorance can cripple a fine sport for years to come.

# NEWS

"Henry J.", the name selected for the new low-price Kaiser-Frazer car, was derived from that of Henry J. Kaiser, one of the founders of the firm. The name was worth $10,000 to the Denver housewife who made the prize-winning suggestion in a recent $200,000 K-F name-finding contest. One of the stockholders was unhappy over Mr. Kaiser's use of two cars to spell his name and promptly filed a $5,200,000 lawsuit for damage done by selection of "a wholly unfitting, improper and ridiculous name."

A reliable source states that Alfa-Romeo will soon introduce a new line of automobiles, one to be powered by a 1.9 litre, 4-cylinder, ohc engine and the other by a 3 litre, 6-cylinder, ohc unit. Both will be available in a sports model based on tubular frame and light coachwork. The famous 2.5 litre engine will be discontinued.

Briggs Cunningham, popular sports car enthusiast, will enter two Cadillacs in the 24-hour race at Le Mans, France. One will be a stock sedan and the other will carry special streamlined coachwork designed and built by Grumman Aircraft Engineering Corporation.

Alfa Romeo has re-entered racing with a spectacular victory to mark the first race. At the Grand Prix of Europe, Silverstone, England, Alfas came in 1-2-3. Lead by Italian G. Farina, the Argentine driver Fangio and Reg Parnell of England arrived in that order.

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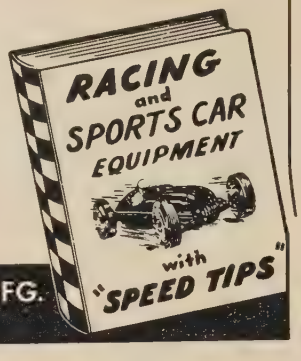


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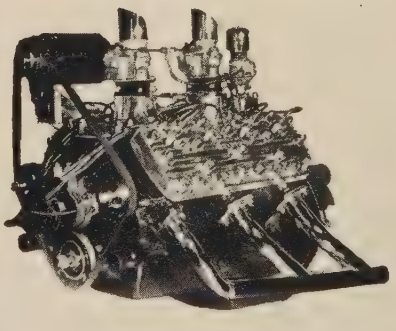

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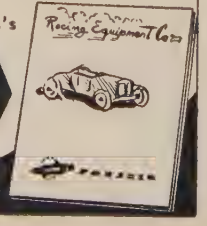


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## ESTHETICS OF DESIGN

*(Continued from page 15)*

(Mr. Loewy concluded with slides of a series of cartoons which he uses with his designers as expressive of his philosophy of design. They stressed the following design points:

Weight and bulk are enemies.
Visibility is essential.
Cars should not be too low or too wide.
Accessibility to car parts and tires for changing is essential.
Have nothing to do with station wagons.
Forget about the lavendar-and-old-lace school.
Forget about the plastic top, and the roadster.
Omit the "waffle school" of chrome carrier that covers the whole front, and the jelly-mold inflationary type of designing that leaves the ground.)

*(At this point, the audience had reached the hissing and booing point, a result of Mr. Loewy's unpopular approach. Mr. Hobson was called back to make a few comments in reply to Loewy. The real problem of restoring harmony lay on the shoulders of the next speaker, however.)*

*Mr. Geoffrey Smith,* editor of the British publication "Autocar," from the floor:

I find you have to duck into big cars like the Lincoln—it is a jolly nuisance to get in and out. On visibility, if you suffered from the fogs we suffer from in England, you would never make the bonnet so long or so high or the steering-wheel a half mile away from the windscreen—quite impossible for driving in our London fogs.

I hold no brief for the MG, but Mr. Loewy took a car designed 20 years ago and has compared it to the modern car. I don't think that was quite all right. The MG sells the biggest number in America, and I think those are darned good cars. The tank at the back just runs you about 400 miles on one fill-up, and that is not too bad. You can get at the engine too.

Environment does affect design. Mr. Loewy seems to think every car should be a sedan. I suggest that it would not be for us to buy cars by the yard. Let a man buy whatever car he wants.

*Mr. Eliot Noyes,* former Director of the Department of Design of the Museum of Modern Art, from the floor.

I think the first postwar Studebaker has come close to being the most effectively received car of the postwar years. But in the design of the 1950 model, many people feel that they have been tricked and betrayed by a change of design direction. Was this intentional or did it happen under force of management and engineering requirements?

*Mr. Loewy:*

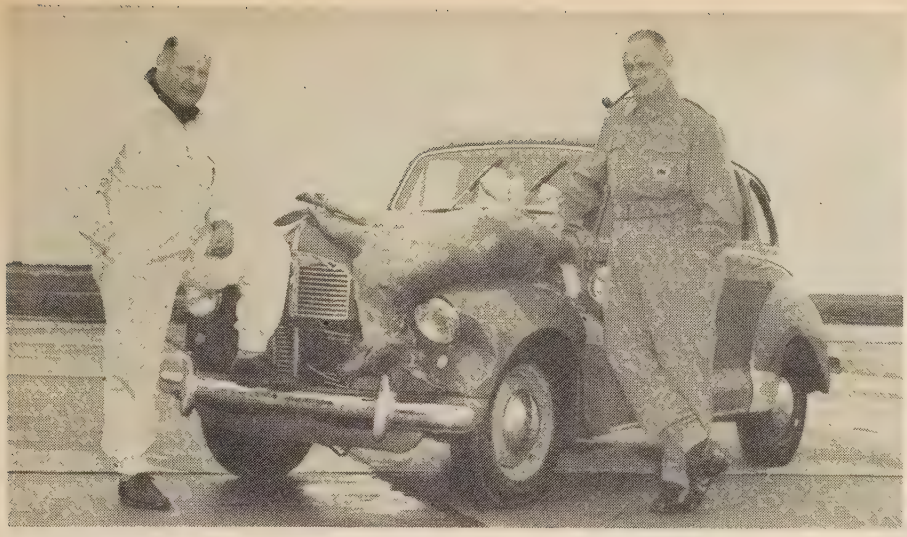
The reason for the change of design is that we like it better, we think it much more dynamic; it has more directional design. And since sales are much higher than last year, the public seems to like it better that way too.

*Moderator Johnson:*

Advertising can make people like this or that, and the consumer will vote only for things he knows. He has never had a chance to have anything else. You don't vote against your own choice of clothes.

*Mr. Crawford:*

Nevertheless when people in New York were asked "Is there anything about the new 'blank' car that you especially like?" 20% of them answered "Appearance" as the number one item that they liked. Above every other thing they like the appearance.



# AUSTIN A-40 BREAKS 36 STOCK CAR RECORDS BEFORE HITTING DEER

Picture a closed course with a short straight, a turn, a short straight, a turn, and so on to include eight of each—rain, thunderstorms and fog, and surface that literally chews tires to pieces. One might think this a difficult road race circuit, but rather it was the course on which the Austin A-40 "Devon" sedan recently established 36 A.A.A. certified American Stock Car Records.

The octagonal perimeter of the Suffolk County, Long Island, airport, scene of the Heart Trophy Race, was the site of what was to have been a 24 hour run. Drivers Alan Hess, who established 63 American Stock Car Records with an Austin A-90 at Indianapolis, and Col. "Goldie" Gardner, holder of the majority of the International records from 2 litres down with his M.G., took turns in three-hour shifts. The nocturnal wanderings of a full-grown deer, and its subsequent head-on collision with the speeding A-40 at 1:30 a.m., put an end to the long-distance record attempts altho 24 had been established by this time. However, later in the morning 12 flying and standing start records were captured.

The Class F closed car division, in which the 73.17 cu. in Austin falls, includes all cars from 67 to 91.5 cu. in (1,100 to 1,500 cc). Prior to the A-40 run, there had been no records established in this class.

The original intention and equipage was for a long distance run at the Bonneville Salt Flats, but an excess of rain there has prohibited its use until June, when further attempts will be made.

Alan Hess and Col. Goldie Gardner pose with "tweaked" Austin and the deer that did it.

A few days later, accompanied by an A.A.A. Contest Board Observer, Mr. Hess drove the deer-dented A-40 from New York to Toronto, a distance of 514 miles, and averaged 33.3 miles per gallon of gasoline. An average speed of 31 mph was maintained.

Records established during the airport record run are:

DISTANCE RECORDS

| | | | |
|---|---|---|---|
| 25 km | 65.43 mph | 25 mi | 65.80 mph |
| 50 km | 65.87 mph | 50 mi | 66.20 mph |
| 75 km | 65.94 mph | 75 mi | 66.24 mph |
| 100 km | 66.04 mph | 100 mi | 66.21 mph |
| 200 km | 65.41 mph | 200 mi | 65.80 mph |
| 250 km | 65.67 mph | 250 mi | 65.60 mph |
| 300 km | 65.76 mph | 300 mi | 65.94 mph |
| 400 km | 65.59 mph | 400 mi | 65.70 mph |
| 500 km | 65.99 mph | 500 mi | 64.67 mph |
| 1000 km | 64.83 mph | 1000 mi | 64.84 mph |

TIME RECORDS

| | | | |
|---|---|---|---|
| 1 hour | 66.04 mph | 3 hours | 65.82 mph |
| 6 hours | 65.69 mph | 12 hours | 65.08 mph |

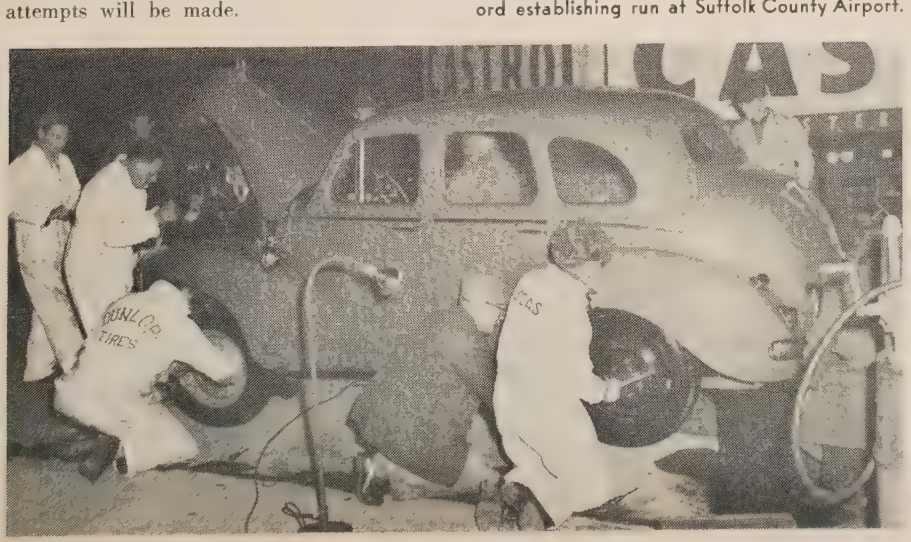
FLYING START RECORDS

| | | | |
|---|---|---|---|
| 1 mi | 65.67 mph | 1 km | 68.10 mph |
| 5 mi | 66.26 mph | 5 km | 66.55 mph |
| 10 mi | 64.95 mph | 10 km | 65.79 mph |

STANDING START RECORDS

| | | | |
|---|---|---|---|
| 1 mi | 55.13 mph | 1 km | 47.51 mph |
| 5 mi | 61.99 mph | 5 km | 61.36 mph |
| 10 mi | 62.80 mph | 10 km | 62.50 mph |

Pit crew swarms over A-40 during stop on record establishing run at Suffolk County Airport.

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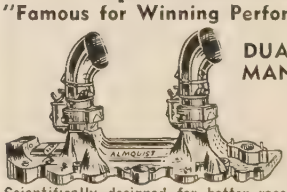

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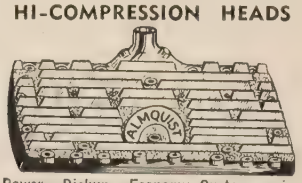

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*Autolist*

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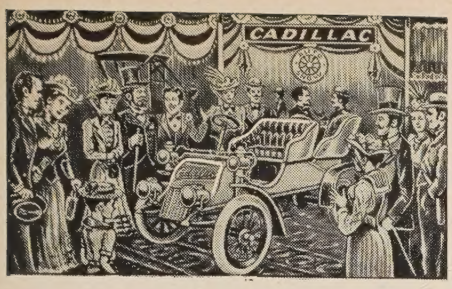


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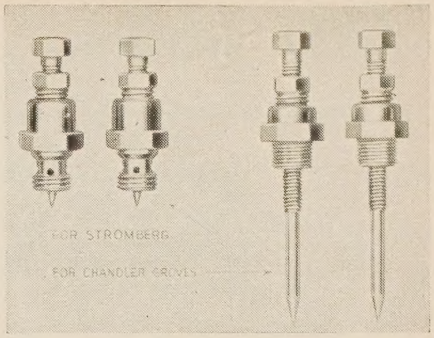


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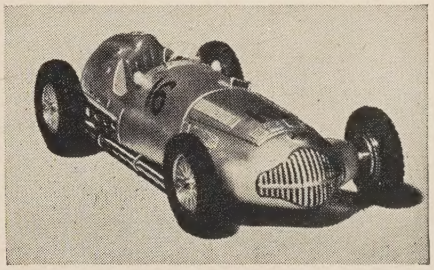

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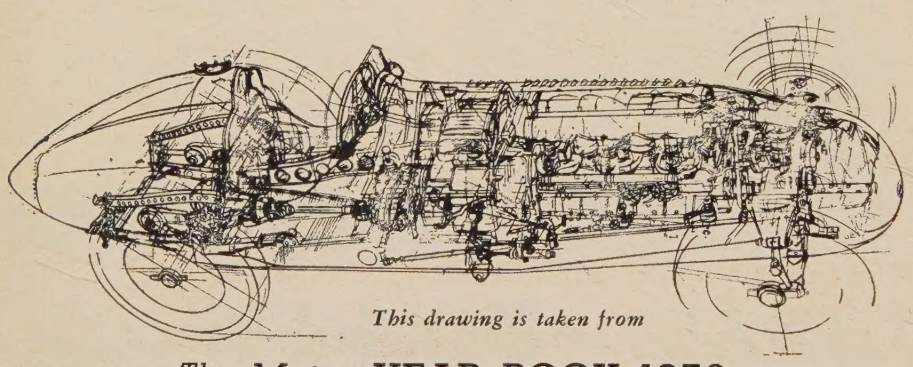

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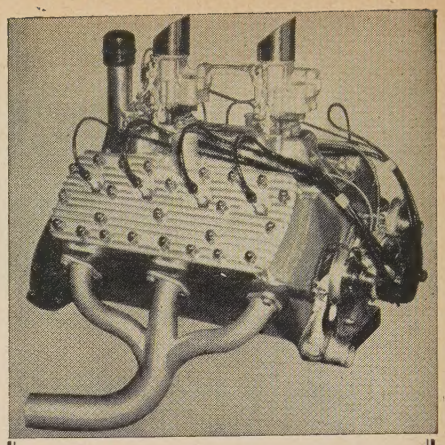

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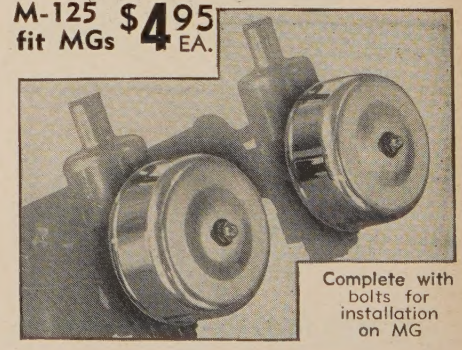

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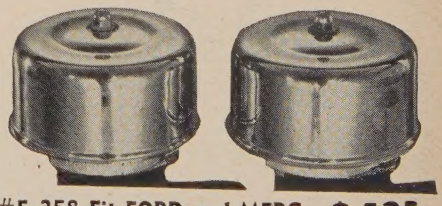

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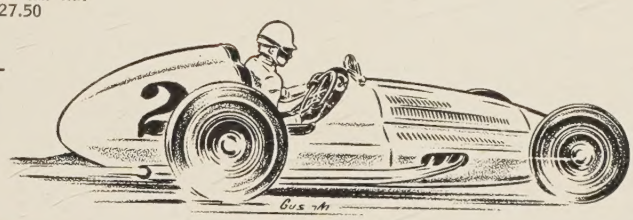

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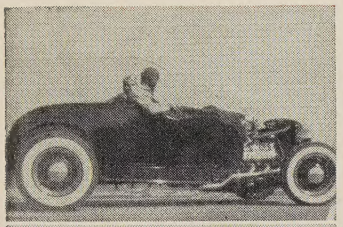

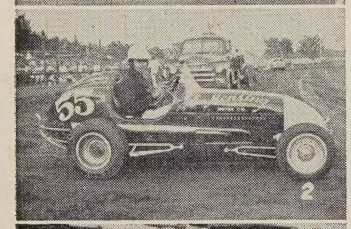

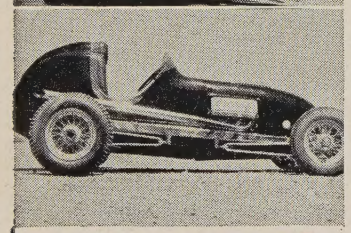

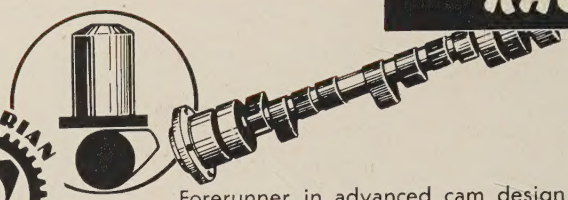

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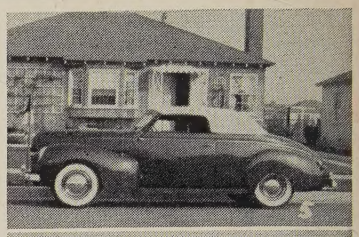

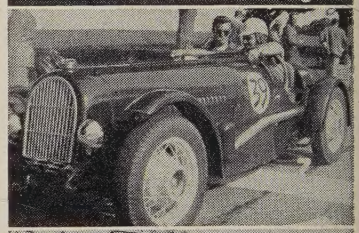

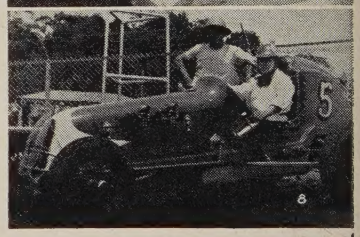

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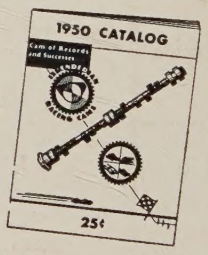

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